
FADS AND QUACKERY IN HEALING

AN ANALYSIS OF THE FOIBLES
OF THE HEALING CULTS, WITH ESSAYS
ON VARIOUS OTHER PECULIAR NOTIONS
IN THE HEALTH FIELD

BY

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Dedicated to

DR. LUDVIG HEKTOEN

**DIRECTOR OF THE McCORMICK INSTITUTE
FOR INFECTIOUS DISEASES,
WHO, AS PRECEPTOR, ENCOURAGED ME
TO THINK CAREFULLY AND TO WRITE
— AS APPEARS LATER,**

and to

**DR. GEORGE H. SIMMONS
EDITOR AND GENERAL MANAGER EMERITUS
AMERICAN MEDICAL ASSOCIATION,
WHOSE UNRELENTING AND COURAGEOUS WARFARE
AGAINST MEDICAL QUACKERY
HAS BEEN AN INSPIRATION
TO HIS SUCCESSORS.**

P R E F A C E

THIS book has been developed largely from the material included in the books called "The Medical Follies" and "The New Medical Follies." Many of the essays appear here for the first time. The chapters have been arranged so as to trace the logical evolution of quackery from the earliest times to such master minds as exploit public weaknesses today through the mail and on the radio.

MORRIS FISHBEIN

Chicago, June 1, 1932.

T A B L E O F C O N T E N T S

PREFACE	v
I. THE EVOLUTION OF MEDICAL QUACKERY	1
II. ELISHA PERKINS AND HIS WONDERFUL TRACTORS	9
III. THE RISE AND FALL OF HOMEOPATHY	19
IV. THE END OF ECLECTICISM	30
V. FROM THE BEGINNING OF MIND HEALING TO CHRISTIAN SCIENCE	44
VI. OFFSHOOTS OF FAITH HEALING	65
VII. OSTEOPATHY	76
VIII. CHIROPRACTIC	98
IX. NATUROPATHY AND ITS PROFESSORS	117
X. THE QUACKERY OF ALBERT ABRAMS	140
XI. "PHYSICAL CULTURE," BERNARR MACFADDEN AND GLUTTONS FOR EXERCISE	156
XII. THE BIG MUSCLE BOYS	166
XIII. THE ANTIVIVISECTIONIST AND ANIMAL EXPERI- MENTATION	180
XIV. FADS IN HEALTH LEGISLATION	191
XV. THE CULT OF BEAUTY	210

XVI. REJUVENATION	228
XVII. THE PROBLEM OF BIRTH CONTROL	242
XVIII. SOME FOOD FADS	252
XIX. WHAT AMERICA DRINKS	279
XX. LIGHT, HEAT AND ELECTRICITY	290
XXI. MEDICINE AND THE PRESS	309
XXII. MEDICAL ADVERTISING AND PROPAGANDA	327
XXIII. PSYCHOANALYSIS	344
XXIV. CHOOSING A PHYSICIAN	365
INDEX	373

**FADS AND QUACKERY
IN HEALING**

THE EVOLUTION OF MEDICAL QUACKERY

"It is true that the scientific reasons for preferring one piece of evidence to another are sometimes very strong, but they are never strong enough to outweigh our passions, our prejudices, our interests . . ."—Anatole France in the preface to "Penguin Island."

IN times of great stress, of pain or of sorrow, the human being recants all that he may have learned of science and of truth and resorts to incantation and to prayer. He is ready to grasp at any cure or suggestion that may be offered to him for the alleviation of his travail, never stopping to inquire as to the motives of those who would heal him or as to the basis on which their claims may rest. He is, in other words, but a poor weak mortal, whose judgment is modified by any strong circumstance that may chance to sway him.

Most primitive peoples explain disease as the seizure of the body by demonic or evil influences. Obviously the cure of disease, if the theory be accepted, rests on the conjuring of the demon from the body. Thus arose the belief in the healing powers of the priest craft and in the value of the incantation or the prayer that the priest might utter. Thus, too, came the determination of the remarkable virtues that seem to be inherent in the laying on of hands, for the priests and the medicine men and the healers of all types soon found that the incantation or suggestion, accompanied by physical contact, was far more efficacious than the simple prayer in securing results.

As Maddox indicated in his study of *The Medicine Man*,

the notion of a divine call to the work of representing heaven on earth is not peculiar to any one age, race, religion, or civilization. The healers of the savage tribes were convinced that their powers came to them from a divine source. It is not surprising to learn, as is shown later, that leaders of our modern medical cults likewise believe themselves to be divinely inspired.

The human being craves miracles. Not satisfied with the actual achievements of medical science, which are in themselves miraculous, he searches in the realm of the unknown for manifestations that he cannot understand. An eminent American philosopher, P. T. Barnum, remarked that there is born in this country one sucker every minute. This statement was improved by Joseph Jastrow of the University of Wisconsin, who said that there is a crook born every hour to take care of sixty suckers. This ratio has existed since the beginning of time, and is not likely to change in the future even with the birth of a great many eugenic babies.

There are three fields in which all human beings are credulous—money, matrimony, and medicine. Periods of financial inflation bring thousands of lambs to be fleeced in Wall Street; after the depression, a new group develops ready for the next inflation. For matrimony, there is Reno. Health once lost is regained only with great difficulty and no medical scientist really believes in raising from the dead.

The medicine man of the savage tribe was frequently marked by some mental or physical peculiarity, such as hunchback, gigantic size, a powerful voice, or some similar divergence from normality. Leaders of modern cults are also the possessors of magnetic personalities that mark them early in their careers as not quite usual in their habits of thought. The healer is likely to have a great deal of that quality that is called "it" in Hollywood.

The charlatans are not all in medicine. Regardless of the field in which they operate, they are marked by certain definite characteristics. They are likely to be persons of striking appearance. They are likely to have after their names long lists of abbreviations, constituting an alphabetical

THE EVOLUTION OF MEDICAL QUACKERY

appendage indicating the possession of degrees of knowledge never conferred upon them by any university. Indeed, in many instances these alphabetical combinations indicate membership in organizations founded by the charlatan with the sole motive of personal election to a high office, in order that the name, the title, and the false impression may be available. The charlatan may begin self-deluded as to the powers which he possesses, but sooner or later he finds that he does not have these powers. He then proceeds consciously deluding those who follow him. Soon he has accumulated a considerable group of persons who are convinced of his sincerity, and he is in a blind alley from which he cannot depart. His followers hold him to his leadership. History records but few charlatans who voluntarily gave up their evil ways and embarked on successful, honest careers.

The people who follow the charlatan are not all ignorant. They include frequently some of the leaders of their communities. The cultist's follower is marked by excessive devotion to some person, idea, or thing which is pursued as an intellectual fad. Among the leading followers of cultists of various types have been such persons as Henry Ward Beecher, Julia Ward Howe, and John Brown, who were addicted to phrenology; Emerson who dabbled with theosophy; William James who practiced Fletcherization, and Upton Sinclair who has been devoted to most of the strange notions in health that have crossed the horizon in the last twenty years. Indeed, one finds among the givers of testimonials authors, actors, senators, congressmen, governors, journalists, and perhaps particularly the intelligentsia, characterized as "educated beyond their intellect."

The oldest available medical records are found in the Edwin Smith papyrus some twelve centuries before the Christian era. From that time until the time of the ancient Greeks there was little available in the way of scientific medicine. Then came the time of Hippocrates, Galen, and Celsus, who were concerned with the observation of natural phenomena and with the recording of the natural history of disease. At that very time there were two schools of medi-

cine in Greece, first the school of Hippocrates on the island of Cos, from which emanated the historical texts and the famous case reports; and second the temple of Aesculapius, medical god of healing, at Epidaurus. The cases reported in the Hippocratic texts refer frequently to patients who developed diseases from which they died. So accurately are the symptoms described that it is possible for a modern physician to make a diagnosis in the light of modern knowledge. The cases described on the pillars of the temple at Epidaurus are, however, magical and mysterious. There is, for instance, the record of the lady who came to the temple and asked that she might conceive. It was granted to her, but though a year passed no progeny came upon the scene. She returned to the temple and again repeated her request, this time asking, however, to have a child. This being granted to her, she at once gave birth to a boy six years old who walked around and congratulated his mother on her exceptional performance. Here, obviously, is magic, the record of an incident that never could have occurred.

In this connection it may be well to say that the Biblical records of healing and of raising from the dead are, no doubt, accurate accounts of incidents by eyewitnesses who failed, however, to interpret what they saw. There are numerous records in modern medicine of patients who lapse into trance states and who, being recalled out of such states by the power of suggestion, arise and go about their daily affairs. To the modern informed physician such risings from apparent death are not miracles, because they are perfectly understood. To the uninformed observer of more than nineteen hundred years ago, such an incident might well appear to have been "a raising from the dead."

Following the time of the ancient Greeks came the period known as the dark ages of medical science when men were much more concerned with their souls than with their bodies, not realizing that a healthful soul exists usually in a healthful body. The Middle Ages saw the development of anatomy and physiology and of a science of medicine based on observation.

THE EVOLUTION OF MEDICAL QUACKERY

Whenever a new discovery is made in any field of science there is always an inspired charlatan ready to capitalize the discovery for his personal gain. When the Leyden jar was discovered in Holland, the beginning of our knowledge of electricity brought a prompt adaptation of this knowledge to the cure of disease.

JOHN GRAHAM

Among the first of the charlatans to adapt electric healing was the famous John Graham of England. His temple of health, established in London in 1745, was devoted largely to the promotion of the sale of his elixir of life. It is said that there stood outside his temple a statue of Hygeia, the mythical goddess of health, and inside the temple a statue of Venus. One might see Hygeia for nothing, but the payment of a shilling was necessary if one wished to see Venus. Inside the temple was sold the elixir of life, and there also was the famous celestial bed. The celestial bed was used primarily for the cure of sterility. Those desiring posterity to carry on their work could sleep one night in the bed on payment of 250 pounds. The bed was connected with electric coils. It was placed in a room in which, rumor has it, soft music was played, incense was sprayed about, and colored lights added to the interest of the scene. No doubt, a pleasant time was had by all. Graham spoke of himself as John Graham, servant of the Lord, O.W.L. The phrase "servant of the Lord" indicates his belief in divine inspiration. The term "O.W.L." had nothing to do with a similar abbreviation used during the war, indicating that a soldier was temporarily absent on business in Paris. It referred instead to the words "Oh! Wonderful Love!" The phrase is reminiscent, obviously, of the catchword of modern mental healing called Christian Science; namely, "God is love."

Within every religious healing cult of which record can be found, there are concepts concerning three of the fundamental interests of mankind; namely, sex, hunger, and spiritual belief. Every church has its special concern with these three interests. The Jewish belief of an earlier day had

definite rules regulating sexual relationships, many of them founded on superstition; definite restrictions on diet, and spiritual power on which one might lean in times of doubt and stress. The strange healing cults which sprang up in the United States following the Revolutionary War provided similar principles and regulations.

In his interesting analysis of the life of Elmer Gantry, Sinclair Lewis repeatedly indicates the intimate relationship between sexual interest and spiritual belief. Indeed, the phrase which Elmer so frequently repeats is that famous citation from the speech of Robert Ingersoll having to do with the power of love. The record of Aimee Semple McPherson Hutton is a modern exemplification of sex appeal in the pulpit.

MRS. MAPP

Perhaps the appearance in London in 1736 of Mrs. Mapp, the first recorded bonesetter, is another example of leadership from the feminine point of view in extraordinary healing. The record of Mrs. Mapp appears in an interesting text by C. J. S. Thompson called *Quacks of Old London*. The eminent lady bonesetter had a great following among the nobility, and she did well with her peculiar medical practice until one of her confiding patients was jerked into "kingdom come."

PARACELSIUS

In the fifteenth century there appeared in Switzerland a strange figure, a man so important that Robert Browning wrote an epic poem concerning him, and Schnitzler a play. The great medical historian, Karl Sudhoff, is issuing a new edition of his works, and many men have compiled his biography. His father was a physician, his mother a nurse. He called himself Paracelsus to indicate his belief that he was the peer, if not greater than Celsus, the great Roman physician. Knowing the value of a high sounding title, he gradually added to his given name, which was itself no mean mouthful, namely, Theophrastus von Hohenheim, and he became finally Aureolus Philippus Theophrastus Bombastus

THE EVOLUTION OF MEDICAL QUACKERY

von Hohenheim ab Paracelsus. From the term "Bombastus" comes, no doubt, our modern word "bombast," which referred to the manner of speech of the charlatan.

This Paracelsus knew much about the uses of metals in the human body. He wrote many works of a mystical character. He traveled widely. He drew attention to the fact that in a certain monastery in Carinthia the monks would distract the concentration of the ailing from their ailments by causing them to gaze on some brilliant object. He may perhaps be credited with having written some of the first scientific observations on the power of suggestion.

FRANZ ANTON MESMER

The year 1778 brings to light the famous Franz Anton Mesmer, the founder of Mesmerism or animal magnetism. He appeared in Paris as the famous Viennese physician. Of striking appearance and full of talent, he rapidly accumulated a circle of friends by the magnetism of his wit, his ability to play the piano, and his skill on the harmonica. Mesmer developed in Paris a temple of animal magnetism. In the center stood a large oaken tub full of bottles of water resting on layers of powdered glass and iron filings. From each bottle of water led a little iron rod. The patients sat in concentric circles bound together by a cord which looped around them and passed back to the tub. Here, obviously, is a resemblance to the galvanic cell. The setting was such as invariably enhanced the power of suggestion—stained glass, dimmed lights of mysterious hue, incense sprayed about, dark draperies, and hushed voices. Mesmer and his associates passed about the circle pointing rods to the places where disease was supposed to rest, or applying their own magnetic hands directly to the bodies of patients with obstinate diseases. Cripples cast away their crutches, the sick announced themselves cured of their diseases, and the women, aroused to ecstasy, fell into convulsions in such numbers that it was necessary to place next to the large hall smaller places known as *salles des crises* or "halls of fits,"

FADS AND QUACKERY IN HEALING

into which they might be taken until they had recovered their equilibrium and could be brought back to the circle.

Soon Mesmer and his associates found that certain patients undergoing the manipulations did best when in a state known today as a dream state or hypnotic state, in which condition they were more suggestible. Later he tried to explain how this result was accomplished. It remained for Charcot and Moll and other students of hypnotism to bring about a more definite understanding of this phenomenon.

Disciples of Mesmer came from far and wide to study under his direction and, having learned the art from their master, departed to spread the knowledge of Mesmerism or animal magnetism throughout the world. Temples of magnetic healing were established in many cities in France. Some disciples came to the United States and set up in this country their temples of healing; others traveled about giving demonstrations in animal magnetism, predicting the future, finding lost objects, and in other ways discrediting the beginning of an actual scientific knowledge that its discoverers themselves were unable to comprehend. Out of this atmosphere came the first great American charlatan, Elisha Perkins.

ELISHA PERKINS AND HIS WONDERFUL TRACTORS

"Because it is incompetent, the multitude will not feel its incompetence, and will not seek or defer to the counsels of those who possess the requisite capacity."—Bryce, "The American Commonwealth."

THE story of quackery is a never-ending tale: theorist after theorist propounds new gospels of healing and passes at last into that beyond which remains the great unsolved problem. False prophet after false prophet arises, surrounds himself with fanatical followers, builds himself a sort of distinction while he lolls in the lap of luxury, and then departs this mundane realm, leaving it a sadder if not a wiser world. Indeed, as one reads the roll of the fakers, he becomes well nigh convinced of the doctrine of the transmigration of souls. The same old stories are told in the same old way, with only the addition of new wrinkles based on modern discoveries; the same old green goods is wrapped up and delivered to the yokelry, city and country bred, who deposit their shekels in the cash drawer; the same old come-on men sit at the feet of the master dispenser of hokum to learn the technique, that they too may go forth in the highways and byways and become minor prophets in their own right. Among the first of these was one Dr. Elisha Perkins, student of Yale, well respected country practitioner of Norwich, Connecticut, inventor of the famous metallic tractors.

In 1796 electricity was much more a mystery than it is today. Of course a young fellow named Benjamin Franklin

had done some kite-flying experiments, but no one yet dreamed of electric trolley cars or of incandescent lights or of the radio. Electricity was an unseen but powerful force, understood by no one, uncontrollable, undoubtedly having effects on metals and on human tissues. It is of such stuffs that nostrums and quackery are made.

On January 16, 1741, there was born in Norwich, Connecticut, a young man who, at the height of his powers, was six feet tall, of remarkable symmetry, kindly, sympathetic, and magnetic; who could ride sixty miles a day "without the use of ardent spirits," and who could get along with three to four hours' rest at night. Of such stuff are great quacks, great evangelists, great physicians, and great men made. Unfortunately no one has yet been able to determine whether Elisha Perkins was merely a somewhat deluded physician or actually a great impostor. Of his son's motives, there can, however, be little doubt.

Elisha Perkins, after completing his study of medicine, developed a satisfactory and competent practice. He became a well recognized physician in every sense of those words. Indeed, he was chairman of the Windham County Medical Society, and one of their delegates to the meeting of the Connecticut Medical Society in 1795. These points are emphasized, for a strange similarity will be noted by the persistent reader in an account of the life of one Albert Abrams, who is dealt with later in this volume. It was as a delegate to the meeting of the state society that Elisha Perkins reported his discovery. The historians of the day report that it was received "by some with doubt and caution and by others even with contempt."

Briefly, Dr. Elisha Perkins had figured out that metallic substances influence nerves and muscles. He noted a sudden contraction of a muscle, if the point of a metallic instrument came into contact with it during an operation. He observed that pain stops when a metallic instrument is used to separate the gum from a tooth previous to extracting the tooth. From this he derived the view that metals might have an influence if applied to the body externally. After experimenting with

various metals he developed the famous tractors. These consisted of two rods of brass and iron, about three inches long, rounded at one end and pointed at the other. One side was half round and the other was flat; and on the flat side was stamped "Perkins' Patent Tractors." The little metallic devices were made by Perkins in a small furnace concealed in the wall of his house by sliding panels. One was supposed to be composed of copper, zinc and a little gold, and the other of iron with some silver and platinum. As has been said, they were probably just brass and iron. In any event one authority asserts that they cost a shilling a pair to manufacture and they sold for five guineas.

With these tractors, if one believed the claim of Dr. Perkins, disease could be drawn from the body. In some cases it was customary to draw the instrument from the pained part to the extremities. In obstinate cases Dr. Perkins suggested the necessity of friction upon the part till there was redness with inflammation. It was important that the tractors be drawn downward, for drawing them upward might intensify the disease. For headache one could draw them from the skin of the forehead to the back of the head and down the neck, but Perkins was careful to add that "the headache that arises from drinking to excess, it does not always cure."

As has been said, the state medical society was inclined to be somewhat skeptical of the claims of Elisha Perkins; indeed, it was of the belief that the use of the tractors was essentially a revival of animal magnetism, the form of hypnotic suggestion introduced by Mesmer, and known as Mesmerism. But Perkins was not daunted; he took his discovery to Philadelphia. There, as is told by Dr. Walter R. Steiner, in an excellent study of the life of Perkins, the Connecticut physician met with a most enthusiastic reception. All the hospitals, poorhouses, and infirmaries received him with open arms. "Diseases of the most obstinate nature, which had baffled medical art, were removed by the metallic tractors, and many persons of an advanced age, who had been

crippled for years with chronic rheumatism, were, in several instances, perfectly cured."

The healing of the crippled, particularly those who cannot walk because of rheumatism, is regularly accomplished and cited to the point of monotony by all of the variegated forms of faith healing. It was exactly such a case that received the attention of Emile Coué, autosuggestionist, on his visit to the United States. A woman with chronic rheumatism, who had made no effort to walk in many years, arose at the urging of Coué and paraded across the stage of the theater, to the terrific applause of the credulous, who had yielded one dollar each to witness the miracle. A brief week later the ancient cripple's weakened heart tissue succumbed to her unusual efforts and she departed her rheumatism and her terrestrial existence simultaneously.

Continuing with Dr. Steiner's narrative, we learn that Congress was in session when Dr. Perkins arrived in Philadelphia and that he took that distinguished body of thinkers by storm. It is reported that a gentleman of Virginia sold his plantation and took his pay for it in tractors. George Washington purchased a set for the use of his family and the Chief Justice of the United States, the Hon. Oliver Ellsworth, gave Perkins a letter of introduction to John Marshall, his successor. Ellsworth does not appear to have been altogether convinced; nevertheless he wrote: "In some cases the effects wrought are not easily ascribable to imagination, great and delusive as is its power."

THE TESTIMONIAL

We know today the amount of reliance that is to be placed on the testimonials of the great in matters of this kind. It is reported that Alice Roosevelt Longworth sells her portrait to a cold cream company for five thousand dollars. The Honorable "Billy Mason," congressman, testified to the virtues of Nuxated Iron, as did also the renowned Jack Dempsey. When Sanatogen, a glorified cottage cheese, was making its bow to the American public, artists, statesmen, tragedians and litterateurs vied with one another in singing its praises.

Alas! today this combination of casein and glycerophosphates no longer holds forth as the magic formula that will save the nation's great from neurasthenia! If only the public knew that testimonials for almost anything can be bought in bundles of five thousand from New York firms that profit by their purchase from derelict promoters of nostrums and by their sales to the exploiters of new devices, our possessors of fame and notoriety might hesitate to sell their letters of praise.

The testimonial continues to be the basis for the promotion of patent medicines and every form of medical quackery. Somehow there is something convincing in the information that one's neighbor or that a resident of even the same state has been cured of what ails him or her by whatever it is that someone may be selling. Consider, for instance, Fleischmann's yeast. It is just yeast with the qualities that yeast possesses; namely, a slightly laxative effect and the value inherent in vitamin B. More recently the yeast has been irradiated so that it provides also a quantity of vitamin D. Nevertheless, this simple mixture has been promoted largely by the testimonial route for most of the ailments that afflict mankind. First the testimonials used were of the type that involved the ordinary citizenry. For instance, "Miss Rivergrove, Nevada," who won the beauty contest in that section, testified that she formerly had been unable to push a baby-buggy three blocks, but that she was now able to swim the Arizona River with one hand tied behind her because she has been taking two cakes of Fleischmann's yeast three times a day.

Alva Johnson, writer for the New York *Herald Tribune*, told in the *Outlook* how the advertising agency that developed the Fleischmann yeast testimonials used a blacksmith's helper as the basis for one testimonial. Obviously a blacksmith's helper will attract little attention in an advertisement. Dressed like a polo player, he stood behind the horse in his usual position, while the advertisement read: "**PROMINENT SPORTSMAN TESTIFIES TO THE USES OF FLEISCHMANN'S YEAST.**"

More recently this type of testimonial has been discarded by the Fleischmann Company, and in its place one sees a bearded scientist from abroad, gazing through a microscope and announcing the virtues of yeast as a remover of pimples and as a promoter of health. Several of the scientists whose names and photographs have appeared in these announcements have written to *The Journal of the American Medical Association* complaining that they had never intended such use of their names and portraits, but that these had been wheedled from them by alert American advertising men who had promised donations to the physician's favorite charity as a reward for a scientific statement on the subject of yeast.

Time and again *The Journal of the American Medical Association* has shown on one page the testimonial of some citizen whose kidneys or lungs have been benefited, in his belief, by some nostrum or patent medicine, and has shown on the opposite page the death certificate of the same individual who apparently had died of his complaint three days before the testimonial was published. Nevertheless, the testimonial continues to be a great power in convincing many people.

Late in 1931 the Federal Trade Commission ruled that testimonials paid for must have this fact clearly indicated and announced the figures paid by one proprietary face cream manufacturer to several leading citizens. Now Lucky Strike Cigaretts are advertised with the photographs of famous motion picture actors and actresses and with the announcement that the testimonial is not paid for. Nevertheless, the photographs are timed to appear in association with the release of new pictures in which the motion picture stars are featured. That type of publicity can easily be measured in terms of cash.

PERKINS MEETS OPPOSITION

Elisha Perkins patented his tractors on February 19, 1796, and in May the Connecticut Medical Society expressed its opinion of Elisha in English as picturesque as it is forceful:

ELISHA PERKINS AND HIS WONDERFUL TRACTORS

VOTED, It having been represented to the Society, that one of their members had gleaned up from the miserable remains of animal magnetism, a practice of stroking with metallic Instruments, the pained parts of human bodies, giving out that such strokings will radically cure the most obstinate pain to which our frame is incident, causing false reports to be propagated of the effects of such strokings, especially where they have been performed on some public occasions, and on men of distinction; also that an excursion has been made abroad and a patent obtained from under the authority of the United States, to aid such delusive quackery; that under such auspices as membership of this Society and the patent above mentioned, the delusion is progressing to the Southward, which may occasion disgrace to the Society and mischief abroad; wherefore this Society announce to the public, that they consider all such practices as barefaced imposition, disgraceful to the faculty, and delusive to the ignorant; and they further direct their Secretary to cite any member of this Society, practicing as above, before them, at their next meeting, to answer for his conduct, and render reasons why he should not be expelled from the Society, for such disgraceful practices.

At a later meeting Elisha Perkins was expelled.

The excursion abroad, to which the state medical society referred, was a project of the son of Elisha Perkins, the gentleman concerning whose motives we have already expressed some doubt. Benjamin Douglas Perkins, Yale, 1794, left for England in 1795 and established a trade in tractors, occupying the house formerly occupied by the great scientist, John Hunter. In 1798 Benjamin published a volume dealing with the scientific aspects of his father's discovery. The book was called "The Influence of Metallic Tractors on the Human Body in Removing Various Painful Inflammatory Diseases, Such as Rheumatism, Pleurisy, Some Gouty Affections, etc., Lately Discovered by Dr. Perkins of North America and Demonstrated in a Series of Experiments and Observations by Professor Meigs, Woodward, Rogers, etc., by Which the Importance of the Discovery is Fully Ascertained, and a New Field of Inquiry Opened in the Modern Sciences of

FADS AND QUACKERY IN HEALING

Galvanism, or Animal Electricity, by Benjamin Douglas Perkins, A.M., Son of the Discoverer."

In this remarkable book it is pointed out that the tractors operated on the galvanic principle. Their virtues are attested by ten members of the Connecticut Medical Society and by three physicians from other states. Nine clergymen also tell how the tractors brought them relief, and, as Dr. Steiner points out, one of the clergyman found "them also useful in picking walnuts." There were also testimonials from university professors, from governors of almshouses, and from members of the legislature.

THE BIGGER THEY ARE THE HARDER THEY FALL

Learned persons with one-track minds can always be found who will endorse the most ridiculous hocus-pocus in matters of health. As is well known, the most enthusiastic of the followers of Albert Abrams of our own day has been one Upton Sinclair, who has at various times endorsed half a dozen health fads and forms of cultism. Unmindful of the history of quackery, many physicians have expressed surprise that men who have made superlative successes in business, in the arts, and in the learned professions, become the victims of New Thought, Christian Science, Abramsism, and what-not. Credulity, unfortunately, is not limited to any single class. There is pride of learning and accomplishment that is more dangerous than the most abject ignorance.

Before we proceed to the last stages of Perkinsism, however, let us recount the passing of the great Elisha. Yellow fever broke out in New York City in 1799. The period was that dark age in medicine before the commission headed by Walter Reed in Havana had shown that the disease is transmitted by the mosquito and before William Crawford Gorgas had shown that yellow fever could be stamped from the face of the earth by applying this knowledge. It required the discoveries of Pasteur and the magnificent investigations of the first quarter of the twentieth century to abolish this pestilence. In Perkins' time yellow fever was the most dread scourge of seaports and cities. So, when the disease broke out

ELISHA PERKINS AND HIS WONDERFUL TRACTORS

in New York, Elisha thought the time right for a demonstration of a medicinal formula which his fertile brain had evolved. His remedy was essentially a combination of vinegar and salt, which was administered in tablespoon doses, diluted with three parts of hot water. For three weeks Dr. Perkins prescribed this medicine assiduously and, as might be surmised, with but little success. Then he himself succumbed to the disease and gave up the ghost on September 6, 1799.

About this time Benjamin Douglas Perkins burst forth with another edition of his book. There appeared also a volume which recounted certain Danish experiments with the tractors, translated from the Danish into German and thence into English. Not only had the Danish investigators tested the tractors on human beings but also on horses. To their report Benjamin Perkins added the records of one hundred and fifty additional English cases.

We shall see later, in discussing other cults, that the beginning of their decline is usually contemporaneous with attempts to apply them to the lower animals. A horse is, after all, a piece of property and not to be compared with a child or a wife or any other foolish human being. Even our government is much more ready to appropriate money for the control of disease among pigs and cows and horses than among human beings. Moreover, a horse never gives a testimonial; hence, perhaps, the term "horse sense."

It has been customary for medical leaders, viewing the rise of Christian Science, osteopathy, and chiropractic in our country, to sigh, almost regretfully, that the English never fall for such things. Of course, the English did fall heavily for homeopathy; an English committee solemnly found that the principle underlying Abramsism might be sound, and the leaders of British medical organizations are beginning to worry about bone-setters, osteopaths, and spinal adjusters. And England fell harder than any other country for "tractionation" as expounded by Benjamin Douglas Perkins. Testimonials were secured from all sorts of reverends, including the chaplain to the Prince of Wales; Lord Henniker condescended to patronize the discovery and bought three pairs

of tractors. Finally, a dispensary for the poor was opened, sponsored by a committee which included eleven vice presidents, and solemnly dedicated at a dinner during which odes and poems were inflicted on those present.

Eventually one medical practitioner, John Haygarth of Bath, assisted by Dr. Falconer, made a pair of tractors out of wood and fixed them up to resemble the authentic specimens. With these they succeeded in producing what appeared also to be remarkable cures. They sent false specimens to other physicians, who forthwith reported astounding results. Then in 1803 Perkins, who had become a Quaker, left England with a profit of some fifty thousand dollars from the tractor business and established himself in New York as a publisher and bookseller. Honored and esteemed, Benjamin Douglas Perkins died on October 13, 1810, at the age of thirty-seven, the life expectancy of that day; by 1811 people were already speaking of "tractoration" as one of the follies of the past.

There in brief is the story of one of the first of the great American quacks. Dr. Walter Steiner, whose collection of Perkinsiana is probably the most complete available, is convinced that Elisha himself believed in the efficiency of the tractors but is inclined to think that Benjamin Douglas Perkins was somewhat of a rascal. As we shall see later, one is frequently at a loss to know just how far any apostle of cultism believes in himself and in his delusion and just how far he is willing to take the profits and a chance on the sincerity.

THE RISE AND FALL OF HOMEOPATHY

Diseases are cured, not by eloquence, but by remedies well and duly applied, of which, if any sage and discreet man, though he have no tongue, know well the proper usage, he shall become a greater physician than if, without practice, he ornament well his language.

—*Cornelius Celsus* (25 B.C.-50 A.D.).

IF scientific medicine today is withstanding nonchalantly the assaults of a myriad of systems, cults, and quackeries, it is merely repeating the history of other periods. The eighteenth century, for example, was predominantly a time of revolutionary systems and theories in medicine. There was the dynamico-organic system of Stahl, who believed that the soul was the supreme principle of disease. There was the mechanico-dynamic system of Hoffmann teaching that life expresses itself in motion, and that all manifestations within the body are controlled by nervous spirit. The school of Montpellier taught that various organs possess individual life. Mesmer, prince of impostors, claimed that magnetic fluid poured from the hand, and the Brunonian system asserted that it was only necessary for a cure to determine the grade of disease in accordance with the strength or weakness of the active irritation, and to adjust the right proportion of strengthening or weakening medicines to the case. Further, there remained from previous centuries phlogistic and antiphlogistic theories, the view that all disease was caused by the impaction of débris and obstruction of the intestines, and half a dozen other assorted hypotheses.

At the end of the century scientific medicine had little of its own to offer. Pasteur had not discovered the bacteria, Lister had not given us asepsis, chemistry was only beginning to be a science, and the other fundamental medical sciences—anatomy, pathology, biology, and physiology—had just begun to sort out their facts from a welter of hypotheses. Drugs were known in abundance, but there was nothing comparable to the scientific pharmacology of today. All sorts of mixtures and combinations were used without reference to the effects that the ingredients of a mixture might have upon one another. When a positive action was obtained it was credited to the mixture and not to the individual ingredient responsible. Such was the scene just before 1800. Upon this stage there stepped a remarkable figure, Samuel Christian Friedrich Hahnemann, born at Meissen in Germany in 1755.

EARLY YEARS OF HAHNEMANN

After studying at Leipzig and Vienna, Hahnemann graduated in medicine at Erlangen in 1779, but he became dissatisfied with the practice of his profession and retired for reflection and study. In 1790 there came into his hands a *materia medica* written by William Cullen of Lanarkshire. Cullen was professor of medicine at Glasgow and Edinburgh and founder himself of a system of medicine which emphasized the importance of the nerves, and assumed that the brain was indissolubly united with the soul. Cullen, however, was a practical man; his therapeutics were simple and he deplored the excessive bloodletting which was a feature of the medicine of the time. It had already been attacked by Le Sage in *Gil Blas*, by Molière, and by many others. Hahnemann read in the book by Cullen that Peruvian bark, the source of quinine, would cure malaria. This was true; quinine does cure malaria. But what did Hahnemann do with the observation? Unfortunately, he did not know that malaria is caused by a plasmodium which gets into the blood through the agency of the mosquito; the plasmodium was not discovered by Laveran until November 6, 1880. So

Hahnemann evolved the theory that perhaps quinine cured malaria because it would produce symptoms like those of malaria if given to a healthy man. He tried it on himself and it did. With this idea fixed in his mind, he returned to the practice of medicine in 1796, and his remarkable hypothesis became the basis of the system called homeopathy, expressed in the phrase *similia similibus curantur*, "like cures like."

This idea was not really original; it was essentially a revival of the old Paracelsian doctrine of signatures—like cures like—except that Paracelsus directed his attack toward the cause of the disease rather than at the symptoms. There are, in fact, some who assert that Milton, in his preface to *Samson Agonistes*, was alluding to the same thing as practiced in his time:

(Tragedy is) therefore said by Aristotle to be of power, by raising pity and fear, or terror, to purge the mind of those and such like passions; that is, to temper and reduce them to just measure with a kind of delight, stirred up by reading or seeing those passions well imitated. Nor is Nature wanting in her own effort to make good his assertion: for so in physic, things of melancholic hue and quality are used against melancholy, sour against sour, salt to remove salt humors.

The idea, therefore, was not new.

THE HOMEOPATHIC *Organon*

After his return to practice, it became Hahnemann's chief interest in life to propagate his theory. He began at once to write extensively, and it is significant that he did not confine his propaganda to the medical profession but addressed the public as well. Furthermore, it is a fact that he received all students, all applicants for knowledge of his methods, whether or not they had been previously trained in medicine. Then in 1810, he presented to the world the homeopathic bible, *Organon der Rationellen Heilkunde*.

The Hahnemannian system of disease and its healing, as

presented in this book, involved three main tenets: first, that diseases or symptoms of disease are curable by particular drugs which produce similar pathologic effects upon the healthy body; second, that the dynamic effect or force of drugs is increased by giving them in very small doses, even diluted to a decillionth of their original strength, and lastly, that chronic diseases are a manifestation of a suppressed itch or "psora."

Hahnemann seems to have known practically nothing of, or to have been unwilling to recognize, the existence of those definite changes in the human body that are associated with disease, and that are now included under the science of pathology. To him disease was chiefly a matter of the spirit. "Diseases," he said, "will not cease to be dynamic aberrations of our spiritlike life, manifested by sensations and actions." This spiritual theory, in which Hahnemann believed so implicitly, dominated subsequent homeopathic literature. The "dynamis" not only lay at the bottom of disease; it was also responsible for the power exerted by drugs in working cures.

Hahnemann's theory of "psora" or itch was essentially so preposterous that it began to be deserted even by confirmed homeopaths almost immediately. The "psora" was a miasm or evil spirit which pervaded the body and ultimately manifested itself on the surface in the form of an eruption, or as a nodular growth, or as some other form of skin disturbance. It was Hahnemann's idea that the outward manifestation was a salubrious mechanism for the relief of the inner condition.

The *Organon* said:

The only really salutary treatment is that of the homeopathic method, according to which the totality of symptoms of a natural disease is combated by a medicine in commensurate doses, capable of creating in the healthy body symptoms most similar to those of the natural disease.

Then,

By administering a medicinal potency chosen exactly in accordance with the similitude of symptoms, a somewhat

THE RISE AND FALL OF HOMEOPATHY

stronger, similar, artificial morbid affection is implanted upon the vital power deranged by natural disease; this artificial affection is substituted, as it were, for the weaker similar natural disease against which the instinctive vital force, now only excited to stronger effort by the drug affection, needs only to direct its increased energy; but owing to its brief duration it will soon be overcome by the vital force, now only excited to stronger effort by the drug affection, needs only to direct its increased energy; but owing to its brief duration it will soon be overcome by the vital force, which, liberated first from the natural disease, and then from the substituted natural disease, and then from the substituted artificial (drug) affection, now again finds itself enabled to continue the life of the organism in health.

In simpler terms, the conception was that the drugs induced a condition which was substituted for the actual disease, and that the body could easily get rid of the substitute. That, in brief, was the pharmacologic doctrine of homeopathy.

PROVING A DRUG

It will be remembered that Hahnemann arrived at his method of treatment by observing the symptoms caused by a dose of Peruvian bark. In 1771 Albrecht von Haller had first suggested the method of testing the virtues of drugs by trying them on healthy human beings. The method was revived by Hahnemann, and called "proving a drug." Not only did medical men test drugs upon themselves under this proving system, but all sorts of other proving tests were made by all kinds of more or less qualified individuals. The results, as might be expected, were remarkable. One decillionth of a grain of table salt was found by an imaginative prover to produce on himself 1,349 symptoms. And while the dosages of the early homeopaths often reached the heights of futility, the preparations they used were sometimes of a highly poetic and romantic nature. In a catalogue of homeopathic remedies appeared such strange substances as lachryma filia, the tears of a young girl in great grief and suffering, used for great grief and suffering in young girls.

Then there was *flavus irides*, the yellow ray of the spectrum, there were extracts of three kind of *pediculi*, or lice, and anticipating the modern gland craze, there were extracts of all of the body glands then known. The strength of the drugs used may be estimated from the fact that a child in Gloucester County, Virginia, took \$8 worth of homeopathic medicine at a single sitting, the entire supply of the family for a year, and, not knowing that anything ought to happen, didn't have a symptom!

THE SUCCESS OF HOMEOPATHY

The physicians who were attempting to follow the wavering path of scientific medicine through the mass of medieval superstitions which beset it at that time suddenly found themselves placed on the defensive. Compared to the general medical practice of the age, the system of Hahnemann, though quite fallacious, had two things in its favor: it replaced mixtures of powerful drugs in large doses by small doses of simple ones. Thus a widely used prescription was Rush's Thunderbolt, developed by Benjamin Rush, signer of the Declaration of Independence. It gave ten grains of jalap and ten of calomel at a single dose. A patient who had just tried it thereafter craved weak medicine. Moreover, homeopathy carried with it, as any new and revolutionary system always does, a powerful appeal to the lay imagination. Professors Meyer-Steinheg of Jena and Sudhoff of Leipzig, two of the world's greatest medical historians, assert that the influence of Hahnemann was, on the whole, certainly for good. He emphasized the individualization of the patient in the handling of disease, he stopped the progress of half a dozen or more peculiar systems of treatment based on a false pathology, and he demonstrated the value of testing the actual virtues of drugs by trial. It is probably true that any criticisms which might be brought against him in the light of later and better knowledge apply equally well against a large part of the other medicine of his time. Moreover, we must not hold against him the vagaries and exaggerations into which some of his disciples drifted.

What was the immediate success of homeopathy? In 1821, in Leipzig, the first homeopathic journal was published, the *Archives of the Homeopathic Method of Curing Disease*. In Austria, where homeopathy appeared in 1819, it was forbidden by an imperial decree, but it nevertheless made progress and the decree was revoked in 1837. It reached Italy and Denmark in 1821. Quinn, a physician, introduced the method into Great Britain in 1827, but shortly thereafter medical opposition became strong and practitioners of homeopathy were denied the right to practice. This prohibition, after a long contest, was revoked, and by the eighties homeopathy was prospering. A homeopathic hospital was opened in 1887 in Liverpool on an endowment by Henry Tate, a sugar refiner. The first homeopathic dispensary had been opened in 1841, the second in 1867. In 1885 it was reported that the English dispensaries treated 78,881 patients, or 1,516 a week. At the dedication of the hospital in 1887 a conference of homeopathic practitioners was held, and the hope was expressed that a homeopathic surgeon would soon arrive to take care of work referred by homeopathic practitioners.

HOMEOPATHY IN THE UNITED STATES

But nowhere did homeopathy flourish as it did in the United States. It was apparently brought to this country in 1825. The first homeopathic medical college was organized in Philadelphia in 1848, the next in New York in 1858. About 1880 the homeopathic practitioners were at the height of their influence. Many tales might be told of the battles within the medical fraternity to determine whether the homeopathic or the regular party should control. Indeed, there are whisperings of a session of the American Medical Association at which a phalanx of homeopathic practitioners assaulted the platform and dragged the speakers bodily from their perch. Homeopathic schools appeared in abundance. In 1880 there were in the United States, 72 regular medical colleges, 12 homeopathic colleges, and 6 eclectic colleges. In 1890 there were 93 regular, 14 homeopathic, and 8 eclec-

tic. In 1900 there were 121 regular, 22 homeopathic, and 10 eclectic. And in 1900 the homeopathic practitioners, assembled in Washington, D. C., dedicated a monument in granite and bronze to:

Samuel Christian Frederich Hahnemann,
Doctor in Medicine.

Hofrat
Leader in the Great Medical Reformation
Of the
Nineteenth Century
And
Founder of the
Homeopathic School.

THE DECLINE OF HOMEOPATHY

But from that year the influence of homeopathy began to decline steadily, its schools to close their doors or to merge with regular medical schools, and its practitioners to practice in increasing measure what they called "allopathic" medicine. What happened to bring about this remarkable and sudden change? Undoubtedly two influences, both brought to bear on medical education, induced the ultimate collapse.

The first educational number of *The Journal of the American Medical Association* was published on September 21, 1901. It listed the medical colleges in the United States, the type of education and preliminary entrance requirements enforced in each school, and its provisions for didactic and clinical teaching. It showed that there were 124 regular medical schools, 10 eclectic schools, and 21 homeopathic schools, and it pointed out their qualities and their deficiencies. The poor schools began to wilt and fade—and many of the homeopathic schools were poor ones. By 1905 their graduates were fewer in number than in any year since 1880. In 1907, there were but seventeen homeopathic schools left; in 1908, but sixteen; in 1909, fourteen; in 1912, ten; in 1915, eight; in 1921, five; and in 1925, there re-

THE RISE AND FALL OF HOMEOPATHY

mained but two, and one of these carried a low classification. Altogether during 1923, there were just forty-nine homeopathic graduates.

At the end of 1931, homeopathic medicine continued to be taught only in the New York Homeopathic Medical College and Flower Hospital of New York, and in the Hahnemann Medical College and Hospital in Philadelphia. In the former institution 348 students were registered, and there were 77 men and 3 women graduates. In the Philadelphia institution there were 502 students and 93 graduates for the year. However, in these institutions the medicine that is taught is not homeopathic medicine in the old sense of the word, but modern medicine with some reflection of the history of homeopathy.

In the meantime, gatherings of homeopaths view with interest attempts made abroad to read into the knowledge of the present the homeopathic theories of the past. The demand among young men for opportunity to study medicine is far greater than the number of places available in American medical schools. Hence institutions that give reliable four-year courses are bound to be crowded with students regardless of any strange notions that they may teach, provided they, at the same time, have complete qualifications in medical science. When the homeopathic graduate takes his place in the community he practices regular medicine.

THE DEATH OF HOMEOPATHY

Publicity is a powerful tool. Students who observed the gradual decline of homeopathy began to seek regular schools; in fact, many a young man who had been doctored in his early youth by a homeopathic physician was advised by that very physician not to enter a homeopathic college. The fact is, indeed, that homeopathy died from within. The very disciples of Hahnemann, and most of the more enlightened practitioners of homeopathy since Hahnemann's time, when they came into practice, found their system unavailing in the face of serious illness. They then availed themselves of the right of every practitioner of medicine to use any treatment

that may be for the good of his patient. They informed themselves of scientific medicine and prescribed drugs in doses that would work. The American Institute of Homeopathy, the official organization, finally adopted the definition: "A homeopathic physician is one who adds to his knowledge of medicine a special knowledge of homeopathic therapeutics and observes the Law of Similia. All that pertains to the great field of medical learning is his, by tradition, by inheritance, by right." This was essentially a desire to allow homeopathic practitioners to prescribe "old school" drugs in old school doses. It was a confession of inadequacy and failure.

While homeopathy, as a school, though not the individual homeopathist, had stood still and clung to its law of similars and to Hahnemann's unprovable theory, scientific medicine had been sweeping onward with steady, sure progress. Before such a fact as the inevitable response of the heart to an adequate dose of digitalis, any theory of dynamics and vibrations which called for splitting that dose into decillionth parts was bound to evaporate. Before the rapid effects of the satisfactory administration of mercury and "6o6," measurable by a Wassermann test, theories of "psora" and similars could not exist. The effects of efficient dosages are, as Celsus asserted, positive, sure, visible, convincing. They need no argument, they speak for themselves. Thus, by 1900, all that remained of the original homeopath was the law of similars and the method of using them. Otherwise homeopaths were prescribing diphtheria antitoxin and forgetting belladonna; they were practicing surgery; they were using full doses of drugs when they wanted to get action. It came down to this: that a homeopath was just like any other physician, except that he gave what were essentially nothing but placebos in minor conditions. When the regular medical schools began to raise their standards, the homeopathic schools had to do the same or confess their inferiority. And when they did the same, they lost their students, who had been attracted chiefly by their lower standards, and had to close their doors anyway.

THE RISE AND FALL OF HOMEOPATHY

Thus passed the homeopathic system. Thus, in fact, pass all systems in the practice of medicine. Scientific medicine absorbs from them that which is good, if there is any good, and then they die. Perhaps osteopathy has taught us something by its stress on massage; perhaps even Eddyism has made itself valuable by showing the value of suggestion in conditions affecting the mind. Others, such as chiropractic and Abramism, teach only the ease with which delusions may be foisted on the public. The history of homeopathy is distinct and peculiar. It records the propounding and acceptance of a theory which, in itself wrong, nevertheless influenced the steps of a beginning science into paths that were right.

THE END OF ECLECTICISM

"There is no escaping the fact that we are citizens of an age at once the most skeptical and the most gullible in human history."

—Glenn Frank, "Thunder and Dawn."

IN books on medical history the term eclecticism has two meanings. The first goes back to the Greeks. Following the collection of the Hippocratic texts before the Christian era, certain Greek physicians and scientists formed a group of eclectics who proposed to dispense with preconceived notions and to develop a school of scientific medicine. But they passed, and from the period of Galen (200 A.D.) until that of Paracelsus (1493-1541 A.D.) medicine rested in oblivion while men gave more thought to their souls than to their bodies, to argument than to observation, to theory than to scientific fact.

Then came the second eclecticism. The biting sarcasm of Paracelsus disturbed the calm belief in Galenic medicine, and the discoveries of Vesalius in anatomy, of Harvey as to the circulation of blood, of Jenner concerning vaccination, and particularly of Leeuwenhoek, maker of microscopes, restored accurate observation to its proper leading position in the science of medicine. But the new methods brought new enthusiasts, and a host of new systems threatened to impede all actual progress. Mesmerism, Brunonianism, phrenology, homeopathy, Rademacherism, Baunscheidtism, hydropathy, odic force, and animal magnetism contended for favor, and scientific inquiry was neglected. The appeal of the bizarre is strong even to enlightened men; to a public educated to

THE END OF ECLECTICISM

a belief in the black art, magic, alchemy, and the miracles of the saints, the unusual necessarily had an absolute fascination. Medicine in this way became inordinately complex and chaotic.

Into this maze came Christoph Wilhelm Hufeland, whose whole career was a protest against the confusion. To him systems of medicine were anathema. He wanted the facts. With the founding of his *Journal of Practical Medicine* in 1795 there began a battle for the scientific study of disease that is still going on. Of him it may be said that he was truly eclectic. And after Hufeland came Canstatt, Wunderlich, Skoda, Rokitansky, and all those other robust German scientists who laid the foundations of modern medicine.

ECLECTICISM IN AMERICA

But what of American eclecticism? What relation did it have to Hufeland and his work? And what has become of it? Medical historians at home apparently take but little pride in it, and foreign historians seem to be unaware of its existence. Even the erudite Fielding H. Garrison, whose *History of Medicine* is the last word in English on the subject, astutely ignores this eclecticism. In what is perhaps his only reference to it he waxes, for so calm a man, a little acrid. "In America, under existing legislation," he affirms, "every species of medical sect—osteopathy, chiropRACTIS, Christian Science, eclecticism, botanic medicine, etc.—has been permitted to flourish."

In the land of the free eclecticism is thus something different. It is a system of medicine which treats disease by the application of single remedies to known disturbances, without reference to any scientific classification, but giving special attention to the development of plant remedies. It is the apotheosis of the old grandmother and witch-doctor systems of treatment. It arose out of the attempts of a widow to conserve her husband's income and out of the medical practice of an old woman herb doctor. It profited and prospered, no doubt, by that same reaction against the drastic *materia*

medica of the period around the year 1800 that gave us homeopathy.

Those were days of heavy drugging. Dr. Benjamin Rush, signer of the Declaration, was still prescribing his "Thunderbolt." Homeopathy owed its initial success to the fact that it prescribed small doses of remedies in vast quantities of water, and so did not interfere with the natural tendency of the body to recover. On this tendency—the *vis medicatrix naturae*—all of the cults of history have floated their frail vessels. Eclecticism did so like the rest. It discarded most of the mineral remedies of the time and emphasized the use of the milder drugs derived from plants. It urged the use of single remedies and, at most, of simple combinations. Since most of the remedies it promoted have since been shown to be quite inert or utterly inadequate in the large majority of cases, the vogue of the cult must have rested on the same desire to escape overdrugging that promoted homeopathy. And it had a vogue! At the height of that vogue it graduated several hundred physicians every year from ten medical colleges. But gradually, as scientific medicine progressed, its ranks dwindled, and it fell into the hands of exploiters and promoters. Today it totters feebly in one recognized school and in several diploma mills, it finds itself involved in noisome licensure scandals, and it is likely to succumb shortly to what physicians in their consultations call an *exitus lethalis*.

JACOB TIDD MAKES MEDICINES

Dr. George Andrew Viesselius, born in Holland (or Germany), emigrated to this country in 1749, settled in New Jersey, married an American girl, and established a comfortable practice. When he died in 1767 there remained on his estate, in addition to his widow, a bound or hired boy named Jacob Tidd. Jacob used to help the doctor out by making up washes, salves, plasters, and similar external applications according to formulas that Viesselius had brought from abroad. The community boasted few practitioners and when Viesselius died the widow, as is not unusual with

THE END OF ECLECTICISM

widows, decided to keep the practice going with the assistance of Jacob Tidd. Jacob came into possession, through this association, of the professional papers of Doctor Vies-selius. In 1796-1800 he was in Western Pennsylvania for a time. It is not recorded whether he served as an army doctor or as a private soldier during the Whisky Insurrection, although he did serve, but it is noted that he secured herb remedies from the Indians directly and also from a relative who had been a captive among them.

WOOSTER BEACH—ONE OF THE FOUNDERS

Returning from the war, Tidd set up as a doctor at Ringoes, New Jersey, and soon acquired a lucrative practice. For forty years he practiced at Amwell, in Hunterdon County, New Jersey, apparently limiting himself largely to the external remedies that were a heritage from the old Dutch doctor. Many persons came to him to learn his methods and among them was one Wooster Beach. Beach was born in Trumbull, Connecticut, in 1794. He educated himself and his biographers relate that he pursued eagerly all the adverse criticisms on the medicine of the time that came his way. One day he heard about Jacob Tidd, and went to him in search of instruction. "Suspicious lest his means of livelihood would be wrested from him," says the biographer, "he (Tidd) flatly refused to receive Beach, as he had many others who had applied for the same privilege." Here is one of the marks of the charlatan in medicine. The true medical scientist has no secrets that he guards from other physicians; his knowledge is broadcast through the medical periodicals so that physicians everywhere may use it in alleviating the ills of mankind.

Let us see the type of energy that inspired Beach. In a letter he said: "I was obliged to return home disappointed. But the same anxiety continued, and I felt, respecting my one desire, something as the Apostle Paul is represented to have felt respecting religion, when he said, 'A dispensation of the gospel is committed unto me, and woe be unto me if I preach not the gospel.' " Of such stuff are the founders of

cults made; one always finds them prating in terms of theological derivation, and usually affirming their ability to commune personally with the Deity. Again and again Beach attempted to study with Jacob Tidd. Finally, he came at a time when Tidd was without an assistant. Beach took the place and remained until Tidd died at seventy-four years of age; then he succeeded to the practice. Beach was the formulator of Eclecticism—first under the name of the Reformed Practice of Medicine.

Eventually he went to New York, to treat several cases to which he was called in consultation. He settled there and is said to have become belatedly a student at a medical college, graduating in due form and becoming a member of the New York County Medical Society. In 1825 he started teaching and writing, attacking the use of bloodletting and strong remedies and urging his students to treat disease with nature's remedies—herbs and roots. In 1827 he opened an infirmary in Eldridge Street, New York, and in 1837 he started the New York Medical Academy, which eventually became the Reformed Medical College of New York, the parent school of the eclectic system.

THE RISE OF THOMSONISM

In the meantime, the system of practice known as Thomsonism, later incorporated into Eclecticism, had been developing independently. Samuel Thomson was born in New Hampshire in 1769. When he was four years old he discovered that lobelia, or Indian tobacco (*Lobelia inflata*), an indigenous herb, if chewed, induced vomiting. He amused himself by getting his boy friends to chew it. An old woman herbalist in the vicinity told him more about roots and grasses. He tried to study medicine under a root doctor nearby, but was refused owing to his deficient education. Then he married, went to farming, and began a family. One of his children fell ill of scarlet fever and when the attending physician gave up the case Thomson tried steam inhalations and lobelia with success. Then he became a traveling herb doctor and had his remedies patented in Washington. It will

THE END OF ECLECTICISM

be seen later that the rise of osteopathy hinged on the death of one of the daughters of Andrew Still.

Eventually Thomson tried to settle down in Massachusetts, but he was bitterly attacked by the local medical profession as a quack. Once he was acquitted of murdering some one with too much lobelia; after the trial he found that he had earned sufficient popularity to encourage him to open an office in Boston. The Thomson system of treating disease with herbs, mostly lobelia, was taken up to some extent by others and flourished for twenty years. Thomson died in 1843, "heroically partaking of his own remedies until the very end." His *New Guide to Health*, written in 1822, passed through many editions, and at last became *Thomson's Materia Medica or Botanic Family Physician*. Although opposed by Wooster Beach, who was little inclined to welcome competition, Thomsonism soon became incorporated into the eclectic system.

THE SCHOOLS FOR ECLECTIC MEDICINE

On May 3, 1830, the Reformed Medical Society of New York, founded to support the ideas and the school of Beach, adopted a resolution to found an additional school of eclectic medicine in some town on the Ohio River. It was hoped that in the newly opened country better opportunity would exist for the new school to lead an untrammeled existence. The school was established at Worthington, Ohio, in 1833, as the Worthington Medical College, but it did not thrive. It suspended its sessions in 1839. In 1843, it removed to Cincinnati, which is still the fountainhead of eclecticism in this country. In 1845, it became the Eclectic Medical Institute. By 1848, it was again in difficulties, and a convention was called in Cincinnati to organize a national society of eclectic practitioners. Wooster Beach's name headed the list of organizers, and in 1855 the grand old man of eclecticism became the president of his society.

In the meantime disciples of eclecticism had been spreading the gospel hither and thither in our fair land. Colleges rose and fell like the flowers that bloom in the spring. The

FADS AND QUACKERY IN HEALING

New York Reformed Medical College, born in 1826, was extinct about 1839. The College of Medicine, Botanic, organized in New York City in 1836, died in 1846. The Eclectic Medical Institute of New York, created in 1847 as the Medical School of Fredonia, moved to Rochester in 1848, merged with the Randolph Eclectic Medical Institute, and moved to Syracuse in 1849, becoming the Central Medical College of New York. In 1850, it moved back to Rochester and in 1852 it had its *exitus lethalis*. The Eclectic Medical College of New York City, organized in 1866, graduated its first class in 1867 and then sent forth one every year until 1913, when it succumbed. In the early days running a medical college was usually a profitable procedure, and was thus considered an important accessory to medical practice.

So the colleges of eclectic medicine came and went. The facts for New York were duplicated on a smaller scale in other states, but a multiplication of examples is needless. In 1860 there were four eclectic medical colleges, and they graduated some two hundred dispensers of plant remedies. In 1870, there were five schools; in 1880, eight, and in 1890, and in 1900, nine. Shortly after this time the Council on Medical Education of the American Medical Association began its investigative and publicity activities. At once the number of eclectic schools and the number of their graduates began to decline. By 1915, there were but four eclectic schools, and since 1920 there has remained but one, the school in Cincinnati supported by the National Eclectic Medical Association. True, the Kansas City College of Medicine and Surgery has claimed to be eclectic, but the National Eclectic Association disowns it, and it finds itself of late involved in a diploma mill scandal. In 1925, the Cincinnati school had but thirty-eight graduates. Its complete enrollment was one hundred and forty-eight. Its average attendance during the last five years has been about one hundred.

BOTANICALS IN THE PHARMACOPEIA

During the craze for the development of botanical drugs our pharmacopeia became almost a replica of the herbals of

seventeenth and eighteenth century Europe. The woods and the fields were combed for all varieties of roots and vines and grasses, and they were transformed into infusions, decoctions, syrups, tinctures, extracts, and tablets. The mind of the poor medical student was bewildered by his attempts to learn the botanical names, the nature, and the alleged uses of these hundreds of drugs. Into this confusion the Council on Pharmacy and Chemistry swept like a tempest, supported by blasts from the university laboratories which were carefully investigating, on animals and on man, the real virtues of the remedies in use. Farseeing practitioners like William Osler were condemning the superfluity of preparations, and urging the use only of such as were actually capable of producing definite effects in definite dosages. That the plant remedies survived at all was due not so much to the efforts of the eclectic colleges as to the manufacturers of eclectic remedies and, above all, to the promoters of patent medicines, which were composed largely of complex mixtures of such substances—veritable vegetable soups.

A report of the Council on Pharmacy and Chemistry on one of these eclectic remedies is typical of what has been done to hundreds of them. *Echinacea angustefolia* was first introduced as the main ingredient of a remedy known as Meyer's Blood Purifier. This preparation, according to the label, was powerful as an alterative and antiseptic in all "tumorous and syphilitic indications, old chronic wounds such as fever sores, old ulcers, carbuncles, piles, eczema, wet or dry, also erysipelas and gangrene." It was also "a specific for fever," "adverted typhoid in two or three days," and cured malaria, malignant, remittent, and mountain fever, diphtheria, bites "from the bee to the rattlesnake," and mad dog bites. Obviously a medical gem! The drug was promptly adopted by the medicos of the eclectic school, and shortly afterward different proprietary concerns introduced it to the public under the name of echisia, ecthol, and echitone. Echisia contained, in addition to the *echinacea*, some wild indigo, arbor vitae, and poke root; and echitone contained also pansy and blue flag. The company promoting the

former asserted that wild indigo was a "destroyer of devitalizing elements in the blood" and a "vitalizer of the blood as well," that arbor vitae was "a perfect antiseptic and a generator of vital force in disorganized tissues," and that a long list of diseases, including diphtheria, syphilitic sciatica, and gonorrhreal rheumatism, were "all more or less amenable to full doses" of poke root.

All of this was, of course, the veriest bosh. For the conditions mentioned scientific medicine has provided methods of treatment and remedies that attack the cause. For scarlet fever it has an antitoxin and it disregards the rhus toxicodendron of the Eclectic pharmacopœia; for angina pectoris it seeks sedation and attempts by intricate surgical methods to cut off the sensations of pain, discarding the "specific medicine lobelia" of the eclectics as an unreliable and poisonous drug. The recommendation of bryonia for pain over the eye regardless of the cause, of spigelia for headache over the top of the head increasing in the morning and decreasing in the afternoon, of cactus and white hellebore and gel-sennum for oppressive pain on the top of the head caused by uterine displacement—all of these recommendations, taken from the guidebooks of eclectic medicine, scientific medicine greets today with laughter.

"Slowly, but surely, botanical drugs, upon which many packaged medicines rely for their therapeutic benefits and for the therapeutic claims made for them, are being dropped from the United States Pharmacopœia," says an editorial in the October, 1925, number of *Standard Remedies*, the official organ of the package medicine industry. "Seventeen such drugs were dropped from the 1920 revision of the Pharmacopœia just issued. In 1910 twenty-two were dropped. In 1900, eleven were dropped. The few remaining may be dropped in the next or some future revision." And in an article in the same issue Mr. H. C. Fuller says: "Publications of the eclectic school still support many of the therapeutic claims that have been advanced for a large number of botanical drugs that appear in the above list. However, even here

THE END OF ECLECTICISM

we find a tendency to conservatism and, at times, a repudiation of earlier opinions."

Mr. Fuller, a friend of the package medicine industry, views this situation with alarm. "It is coming to pass," he says, "that the deletion of botanical drugs from official standards and the omission of references to their therapeutic value in modern textbooks, as well as definite statements discrediting the former ideas of their efficacy, will eventually bring about the situation that preparations containing these drugs will have no standing or authoritative support, and will be thrown back almost solely on testimonials, which experience has demonstrated are often of doubtful value. The preparations chiefly affected at present are the so-called Blood Remedies or Alteratives, Rheumatism Remedies, Kidney Remedies, Female Remedies and Nerve Remedies." Here is a statement from an expert as to the present low state of botanical remedies! Mr. Fuller suggests to the manufacturers that the proper procedure would be the employment of research with a view to reestablishing in good scientific usage the remedies which constitute the basis of their nostrums. But do not think Mr. Fuller is naïve; the available information indicates that he is prepared to promote such researches at a reasonable figure.

Thus all the signs and portents indicate that the great deluge of modern scientific chemotherapy is about to wash away the plant and vegetable débris. With that washing will go the last vestiges of Thomsonism and the eclectic practice of Wooster Beach.

THE DECLINE OF THE ECLECTIC COLLEGES

As I have said, the number of medical schools in the United States began to increase rapidly after the Civil War. The creation of many of these schools was due to the self-interest of the men constituting their faculties. Money was to be made by teaching students, and prestige was to be acquired by a self-conferred title of professor. The standards of medical education in this country thus became an offense in the sight of the leaders of American medicine. With the

advent of each new medical cult and of each new group of medical colleges devoted to it, the State legislatures were besought to create separate boards of examiners for the licensing of graduates.

Obviously, the medical practice laws in all the states were intended to safeguard the public against incompetent and untrained physicians. Where states have but a single board administering the act, it accomplishes that purpose. Unfortunately, when new boards are created for various new types of practitioners, the medical practice acts are promptly nullified. If there is such a thing as scientific medicine, and if there are diseases such as smallpox, tuberculosis, typhoid fever, and measles which produce definite changes in the human body, every one who wants to treat human disease ought to be able to recognize the changes they bring about, to diagnose them when present, and to know how to prescribe preventive measures to keep them from spreading throughout the community. Certainly every one who wants to practice the healing art by any method of treatment should be willing to come before an examining body and give evidence of his knowledge of these fundamental things. Nevertheless, the legislators in the various states have created ninety-six separate and independent boards to control medical licensure in America. In some states there are actually five or six different boards created by as many independent medical practice acts, and vesting as many different standards of educational qualification.

Out of this confused mass of laws came a great licensure scandal in 1923, and in that scandal eclectic medical boards played the most prominent part. In 1918, five years before, *The Journal of the American Medical Association* had protested against the manner in which graduates of low-grade medical colleges in Missouri were being licensed by the eclectic boards in Arkansas and Connecticut. For the next five years, it published annually a protest, and indeed insinuated definitely that neither the Arkansas State Board of Eclectic Examiners nor the Kansas City, Missouri, College of Medicine and Surgery could exist unless they were in

cahoots. Connecticut, too, was warned again and again that it was harboring a menace in its eclectic board. But in 1920, the Kansas City College and the Arkansas Eclectic Board entente were still doing business, the former graduating thirty-three men and the latter licensing all but one of them, and in 1921 the Missouri legislature removed the word "reputable," as it related to medical colleges, from its medical practice act and substituted the words, "legally chartered."

In 1922 there developed a new entente: the Connecticut board licensed seventy-one physicians, sixty-one of whom graduated from low-grade medical colleges and three from institutions in California which apparently had never been recognized as professional schools of any type. Of the seventy-one medicos licensed in Connecticut, only twenty-five had actually graduated from eclectic medical colleges, but forty-six more, who logically should have applied to the so-called regular medical board, since they had graduated from what were presumably regular medical colleges, although of extremely low standing, apparently had arranged with the Eclectic board in Connecticut to provide them with licenses. The situation, uncovered first by the *St. Louis Star*, showed clearly that graduates of the St. Louis College of Physicians and Surgeons were being shipped to Connecticut so that the Connecticut Eclectic Board might give them legal entrance into the practice of medicine. The reciprocity laws between the various states then permitted them to ooze gradually out of Connecticut and into other communities.

Following the investigation of 1923, the licenses of one hundred and sixty-seven physicians who had been certified by the Connecticut Eclectic Board were revoked, but seventy-three of these physicians were allowed to continue to practice until their cases are heard by the superior courts. Any one conversant with legal procedure may figure out how long it will be until the Supreme Court acts on these cases and confirms the revocations of licenses. But eclecticism meanwhile is gasping out its last breaths. It was ill for a long time; now a lethal draught of scandal has finished it.

Thus the growth of cults within the science of medicine

provided opportunity for evading the requirement of certain fundamental knowledge in those who proposed to deal with the ailments of humanity. In that evasion the separate state boards dealing with eclecticism seem to have played a most prominent part. The only hope for the protection of the public against such dubious cultists lies in having but one board of medical examiners in each state, and in establishing one minimum standard of qualifications to which every one must measure who is to have the legal right to practice healing. The exemptions of cults because they limit their methods of treatment to manipulation, to mental suggestion, to plant remedies, to highly diluted remedies, or to any other quackery is merely throwing open the doors to unqualified, incompetent, mendacious, and unprincipled pretenders.

As this volume goes to press there appears an announcement of the reopening of the Eclectic Medical College in Cincinnati which is matriculating a freshman class in 1931 and a sophomore class for 1932. In the introduction to this announcement appears a new definition for the eclectic physician; namely, "One who has been adequately trained in the recognized fundamentals of modern scientific medicine, and has added thereto the special knowledge of eclectic *materia medica* and *therapeutics*." It appears then that eclecticism is to proceed as has homeopathy, practicing medicine, continuing to add thereto such eclectic therapeutics as seem desirable to the professors of that subject in the eclectic college. It must be borne in mind that the present decade sees vast numbers of young men applying for entrance into medical school who are not able to gain admission, and it is therefore possible to conduct a medical college with a certain amount of surety of attendance by students, and with tuition fees almost sufficient to carry the expense. Thus, the tuition fees in the eclectic school are to be \$300.00 per year per student, with extra fees for various laboratory courses and records. The indications are that some forty young men will be available for each of the classes.

This does not mean, of course, a rejuvenation of eclectic

THE END OF ECLECTICISM

medicine. It merely means that there is still sufficient interest in botany among this limited group of medical practitioners to make a recurrence of this medical cult possible. The history of medical science would seem to indicate, however, an early relapse and a not far distant end. The patient is not moribund, but very weak.

FROM THE BEGINNING OF MIND HEALING TO CHRISTIAN SCIENCE

"In those periods when man sees everywhere miracle and nowhere law,—when he attributes all things which he cannot understand to a will like his own,—he naturally ascribes his diseases either to the wrath of a good being or to the malice of an evil being."—Andrew D. White, "The Warfare of Science With Theology In Christendom."

THE great vogue of Franz Anton Mesmer brought to him disciples from many places. Soon smaller temples of magnetic healing sprang up. Many of his disciples, as has been related in the first chapter, traveled about demonstrating the Mesmeric technic. Obviously such results as they secured had to do with mental rather than physical defects, and were secured by the power of suggestion. Out of Mesmer's doctrine came all the faith healers of the nineteenth century. From him derived Elisha Perkins, from him also derived Phineas Parkhurst Quimby and Mary Morse Baker Glover Patterson Eddy, Alexander Dowie, Emile Coué, and perhaps even Sigmund Freud. Indeed, it is but a small step from healing by the mind alone to the enhancing of the power of suggestion by the laying on of hands, and finally from such manipulations to the practice of chiropractic and osteopathy.

The beginning of the nineteenth century found Americans fearful of hell fire. The doctrine of Jonathan Edwards had brought about a type of mentality which evolved promptly into hysteria. Moreover, young girls brought up on Fox's *Book of Martyrs* and an indoor life quite promptly

developed a condition called chlorosis, which has practically disappeared in these modern times with the coming of sunlight, outdoor exercise, and fresh air for girls, as well as boys. Shakerism, New Thought, and Mesmerism were already interesting doctrines to many American citizens.

THE RISE OF MARY BAKER EDDY

Mary Morse Baker was born near Concord, New Hampshire, on July 16, 1821. She was frail, delicate, oversensitive, frequently given to spasms and attacks of tantrums. Somewhat pleasing in her personality, she was nevertheless hardly attractive as a child for her beauty. The little girl was smart, always showing off, putting on airs, using long words when short ones would suffice, and displaying in other ways something of precocity. Like all hysterics, once she found that her attacks aroused sympathy, they would be frequently repeated. When she was in convulsions physicians would be called, who, no doubt, were quite aware of the proper diagnosis. Indeed one doctor said that Mary's whole trouble was "hysteria mixed with bad temper." It is reported that her father finally became so used to her attacks that he would simply walk away and give her plenty of time to recover and go about her daily affairs. Frequently she ran away from home, but, like all similar flighty young ladies, she invariably came back. No one had trouble with Mary when she could have her way, but when crossed she could put on a performance that would stop the family.

Fortunately perhaps for her relatives (and she had many of them), she was introduced by her brother, Mark Baker, to a friend named Washington Glover, who was in the contracting business in Charleston, South Carolina. In 1843, when she was 22 years old she married the young man, called "Wash" for short. She must have had a most uncomfortable time, brief as it was. Nevertheless, this first marriage may have been the answer to her problems, because such correspondence as is available indicates no difficulties with health or indeed of any kind whatever. Life with Mary Morse Baker Glover could not have been exceedingly restful. Regardless

of these theoretical cogitations, six months after their marriage Wash Glover developed yellow fever, which was a prevalent disease in those days. He died promptly and was at peace.

Left destitute, the young widow was sent by brother Masons of Glover to New York; from there she went back to Concord, where in September she gave birth to a son called George Washington Glover. Promptly she farmed out the boy to friends, and developed again the spasms, the fits, the convulsions, and the old hysterical performances that had made her such a nuisance and indeed such a problem in her early days. About this time she developed the idea that she was again a child and had to be rocked to sleep. She was living with her sister, a widow named Tilton. A cradle was built for her and hung from the ceiling. Here she would lie and here for hours at a time her nephew or some boy from the village would swing Mrs. Glover. The standard fee varied from a penny to a dime. Gradually she developed greater and greater lassitude and weakness. No longer would she even attempt to walk about. She would simply lie in bed and be waited on.

When she was 32 years old there came to her community a traveling dentist, homeopath, and sewing machine agent, named Dr. Daniel Patterson, a handsome man with long, bushy whiskers, who wore a tall hat and a frock coat and who might have been the Adolph Menjou of his time. On June 21, 1853, he married the invalid, and from that time on they lived a restless existence; living indeed in six cities in five years, while he practiced some of his professions. Always they remained until the jealousy of his wife or the indignation of the husband of some handsome patient caused Dr. Patterson to move on. During all this period Mary Morse Baker Glover Patterson occasionally ventured essays or poems which the village gazettes printed in lieu of modern advertising.

Eventually the Civil War came on, and, perhaps in search of peace, Doctor Patterson went to war. He was captured and confined in Libby Prison. Now his wife, 40 years old, left

alone again, lived about with relatives and with friends, a most unhappy existence, since friends are likely to be critical and relatives may be worse. Under such circumstances her physical complaints gave her increasing difficulty. She lay in bed arguing, battling, contesting with everyone. She tried eclecticism, spiritualism, mesmerism, hydrotherapy, indeed any type of cure that any type of healer would offer.

PHINEAS PARKHURST QUIMBY

Among the disciples of Mesmer was one Charles Poyen, who traveled about in the New England states giving lectures and demonstrations. These attracted wide attention. Eventually Poyen came to the town of Belfast in Maine, where, in 1848, one of his demonstrations was witnessed by Phineas Parkhurst Quimby, son of a blacksmith, and himself something of a jeweler and clock maker. Quimby was fascinated by the mesmeric demonstration. Poyen found in the clock maker an unusual personality. He gave him instructions in the mesmeric method.

By this time the magnetic healers had found that it was possible to fix the attention of the subject to such an extent that the subject would pass into what is called today a hypnoidal or trance state, in which the person is unusually suggestible. Soon it was found that some persons were much more easily hypnotized or magnetized than others. Quimby found a boy 17 years old, named Lucius Burkman, who was of this sensitive character. So Quimby traveled around with Lucius Burkman, giving demonstrations in magnetic healing, also predicting the future and finding lost objects.

The physician attempts to diagnose disease by obtaining the history of the patient, which he correlates with the stories of patients of previous days who have had similar experiences. He then makes a physical examination, determining through palpation, percussion and auscultation significant changes in the normal reactions of the body. Finally, he may take from the patient specimens of blood and of various excretions and secretions which are submitted to determine whether or not they are normal.

FADS AND QUACKERY IN HEALING

The magnetic healer merely brought the sick person close to the subject who was in the hypnoidal state. The subject would then announce the nature of the illness and prescribe a remedy. Obviously the performance was impressive and not a few patients promptly declared themselves benefited merely from contact with the medium without even waiting for the remedy that the medium might prescribe. One day Burkman prescribed a remedy that Quimby did not have. Quimby therefore substituted another remedy, whereupon the patient promptly recovered. It then occurred to Quimby that the remedy was of little importance, but that some vital force must instead be responsible.

THE RUBBING TREATMENT

At this time he developed what may be called the "rubbing" treatment, a method which again brings to mind the idea of electrical phenomena of positive and negative poles. In this technic, the patient unclad was placed upon a table before the healer. With one hand the healer rubbed the center of the patient's abdomen and if the disease happened to be in the upper half of the body, he rubbed, with the other hand, the top of the patient's head. If, however, the disease affected the lower half of the body, the hands were reversed, the right hand manipulating the region in the neighborhood of the umbilicus, and the left hand rubbing the feet. The patient understood from this procedure that the disease was passing from his body.

Readers will recall the conception of the Leyden jar, the galvanic cell in Mesmer's temple, Graham's electrical celestial bed, Benjamin Franklin's kite which drew down electricity from the skies, and Elisha Perkins' positive and negative tractors.

MRS. PATTERSON CONSULTS QUIMBY

Soon Quimby found that it was not even necessary to lay hands on the patient, but that the same results could be achieved by the mind alone. He thus may be credited with having been the founder of modern mind healing. Soon

Phineas Parkhurst Quimby was known throughout the New England states. His consulting room was packed with patients. He was compelled to respond to many requests for advice and information. By 1861 his repute had reached the little town in New Hampshire where Mary Morse Baker Glover Patterson was living previous to the departure of "the Doctor" for the Union Army. Indeed, Doctor Patterson wrote on October 14 to Doctor Quimby, asking him to visit Concord so that he might give his attention to Mrs. Patterson. In 1862, Mrs. Patterson herself wrote to Quimby begging him to give her attention. Eventually, toward the end of October, 1862, she accumulated sufficient funds to enable her to go to Portland, Maine, where she was seen by Quimby. She staggered into his office, apparently still able to walk; but then she dropped into a chair, and apparently went into one of her routines, as the theatrical jargon would put it. Quimby cured her in two treatments, so that a few weeks later she climbed 182 steps to the dome of the city hall as evidence of her recovery. The Christian Scientists refer to the performance as a miracle. It is not, however, in any sense of the word remarkable. It represents merely the treatment by suggestion of a patient with hysterical fits and paralysis, and the curing of a mental condition by the use of the mind alone. Such performances are a daily occurrence in medical practice. The doctors of an earlier day were wont to relieve hysterical complaints and simulated illnesses by what is known as the "ice water" method. After the young lady had remained in bed several days and announced her inability to be of assistance in household duties on frequent occasions, the old family doctor would be called to the bedside. His diagnosis would be made promptly. Then he would go out to the pump, break the ice, and pull up a bucket full of water. Warily approaching the bed with his armamentarium hidden behind him, he would suddenly empty the bucket of ice water on the recumbent damsel. She would leap from her couch and would soon be found busily washing the dishes, apparently cured by a single treatment.

Not long since a Chicago physician, speaking in a small

FADS AND QUACKERY IN HEALING

village in Canada, was asked to see a girl who had lain in bed for many months apparently paralyzed. He examined her and found that all of the joints were freely movable. When a limb has been paralyzed for some time the joint becomes fixed exactly as does a joint that has been held in a plaster cast. Moreover, he found that the tissues of one leg were as good as those of the other, whereas paralysis brought about by meningitis, or by poliomyelitis or infantile paralysis produces a wasting of the tissues so that one leg is smaller than the other. Having determined that the girl was not subject to any organic disease, he suggested to her the basis of his information, and by the power of psychotherapy alone caused her to arise and walk about. This, however, was not a miracle; it was merely the diagnosis by scientific methods of the presence of hysterical paralysis and a cure by the power of suggestion.

THE POWER OF SUGGESTION

Everyone is familiar with the manner in which certain disturbances may be controlled through fixation of the attention. If one wishes to avoid sneezing, he presses his upper lip. Hiccups are treated by sipping seven sips of water, by eating some dry bread, or by fixing the eye on some distant object, or even by counting to one hundred. If, however, the hiccups happen to be due to an infectious disorder which inflames and stimulates the route of the phrenic nerve, sending constant stimuli to the diaphragm, the hiccups continue. Such hiccups are controllable only by physical measures. There is a story told of two British soldiers who were in the trenches with great masses of shot and shell flying here and there. Amidst the thundering of the guns, one of the boys turned to the other and said, "Scare me, Al, I got the hiccups." He knew the value of the power of suggestion.

MRS. PATTERSON STUDIES QUIMBY'S TECHNIC

So now Mary Morse Baker Glover Patterson had a new interest in life. She was 40 years of age, brilliant, vivacious, and beginning to be handsome. Quimby was 65 years of age.

She sat in adoration at his feet. She wrote love sonnets which have been collected and which have come to public attention, interesting not for their poetical merit but because she wrote them. She published a tribute to Quimby in the Portland *Courier*, again interesting for its historical relations rather than for its epic qualities. She determined indeed to study Quimby's method. In the meantime, Phineas Parkhurst Quimby had himself become aware of the significance of his technic and had determined to put it on permanent record. Uneducated, he called in to assist him the two daughters of a judge who lived in that vicinity, and also his son. To them he dictated his message. Frequently they would remonstrate with the old man, pointing out to him his numerous repetitions. He insisted, however, that everything be written in his own language, and he said that anything worth saying once is worth repeating again and again. The first edition of the book called *Science and Health with Key to the Scriptures* is thus a plagiarism of the Quimby manuscript, for Mrs. Patterson had borrowed Quimby's texts, and these she used as the basis for her own volume. The evidence is present even in the repetitions against which the daughters of the judge remonstrated. The lady who founded Christian Science was not herself extremely well educated; her work is full of grammatical errors with amusing failures to comprehend the meaning of words. She confused Washington Irving with Charles Dickens, which is not such a serious error, for even Henry Ford confused Arnold Bennett and Benedict Arnold. However, she seems also to have confused adultery and adulteration, a somewhat more serious error.

MRS. PATTERSON ARRANGES SOME SEPARATIONS

Eventually Doctor Patterson returned from the War. He had apparently been able to cope with the invalid Mrs. Patterson, but the healthy lady was a little too much for him. He finally arranged to pay her an allowance of \$200 a year, and a separation was arranged. Then came the divorce! And with it, a separation of Mary Morse Baker Glover Patterson

FADS AND QUACKERY IN HEALING

from her sister Abigail, who had taken care of her during the days of her trials and tribulations. Mrs. Patterson, now 50 years old, lived about with friends and even with acquaintances, copying the Quimby manuscripts and preparing for the world her future revelations. Wherever she went she preached the doctrine of mind healing. She lived briefly in the home of a factory worker named Hiram Crafts. She sold him so certainly on the idea that he gave up his job and put in the newspaper an announcement of his ability in mind healing. Unfortunately at this time Mrs. Crafts, who had been doing the housework while the mind healing seances were being conducted, decided that a third party in the home was conducive to disharmony, and Mrs. Patterson departed for other quarters. She went to the home of a woman named Webster, presumably to stay for a night, but she remained many weeks and months. It was from this home that she was bodily ejected.

Meanwhile such time as she had was spent in working and reworking and modifying her manuscripts. Finally, in 1868, in a publication devoted to spiritualism appeared her first bid as an educator in the field of mind healing. A copy of the announcement follows:

ANY PERSON desiring to learn how to teach the sick, can receive from the undersigned instruction, that will enable them to commence healing on a principle of science with a success far beyond any of the present modes. No medicine, electricity, physiology or hygiene required for unparalleled success in the most difficult cases. No pay is required unless the skill is obtained.

Address Mrs. MARY B. GLOVER.

Amesbury, Mass. Box 61.

RICHARD KENNEDY JOINS MRS. PATTERSON

And then came another of the men with whom her life is so intimately bound, a living proof of her fascination and the personality by which she secured her disciples. In 1870 this remarkable woman, 50 years old, secured as a follower a boy named Richard Kennedy, 21 years old. She had met him

two years before in a home where cogitations on mind science were a frequent topic of conversation. Then at 21, she took him as a pupil, associated him with her in her efforts, and signed with him a contract whereby he promised, in return for instructions, to provide for her living expenses and to give her half of his income from his practice. Together they went to Lynn, Massachusetts, there to establish the first school of mind healing, the school from which thousands of mind healers have come forth to practice their one-track system of healing on the American people.

LYDIA PINKHAM IN LYNN, MASSACHUSETTS

It is interesting to recall at this time the fact that Lynn, Massachusetts, was also the home of that other great woman of New England, saver of American womankind, Mrs. Lydia Pinkham. She it was who first introduced into American advertising the two marvelous slogans—"Coming events cast their shadows before," and "Reach for a vegetable instead of a sweet."

In Lynn, Massachusetts, in 1870, in the home of a good-looking school mistress, Susie Magoun, Richard Kennedy and his elderly preceptor set themselves up as practitioners of mind science. On a tree in front of the house was nailed a board reading "Dr. Kennedy." In this land of the free anybody can call himself doctor with impunity. We have doctors of baking, horseshoeing, and the tonsorial arts. Indeed, the total number of doctors is exceeded only by the number of available professors.

Almost from the first the combination of Kennedy and Glover (for by this time the lady had reverted to her first husband's name) began to attract patients. Unfortunately, however, Doctor Kennedy could not keep his hands off his clients. He began by rubbing their temples with his moistened fingers while he recited the ritual developed by Mrs. Glover. He was sympathetic and he had the personality that convinces. Few people realized at first, as stated by Stefan Zweig in his marvelous study of Mrs. Eddy in *Mental Healers*, that upstairs in one of the rooms was sitting the old lady

who animated Richard Kennedy with her energy. Indeed, says Zweig, "Never did she show herself in the consulting-room of her Golem." But from this time on Mrs. Glover began to realize the value of the shekels that were to pour from the coffers of the sick into the coffers of Christian Science. From this time on every step that she took was marked by a written contract. She had professional cards printed, calling herself "Mrs. M. Glover, Teacher of Moral Science."

She now began to receive her pupils. Eventually she gave courses of twelve lectures, lasting three weeks, for a fee of \$300. The opening fee was \$100, but was soon increased to the \$300. Moreover, every member of her class agreed to pay to her 10 per cent annually of the income received from practice. It is reported that she had some 1,200 pupils in four years, who, even at an average fee of \$200, must have yielded a considerable income. Here was a medical school without prerequisites and a system of practice that anybody could learn. Here also was a school with an entire course in twelve lectures and with a textbook consisting merely of one of Quimby's manuscripts, with Mrs. Glover's improvements, if they can be called improvements. Indeed, the lady worked over the manuscript so often that eventually she felt it was her own.

Much has been written and probably much more will continue to be written concerning the relationship of the elderly Mary Morse Baker Glover, without the Patterson, and Richard Kennedy. Here was a woman at a critical period in her life associated with a young man, a woman now beginning to feel the thrill of success, able to buy the clothing, the food, and the necessities of life which had previously been grudgingly tendered to her. Stefan Zweig feels that she expected from Richard Kennedy something which he did not and could not give. Indeed, says Zweig, "The woman in her, the fleshly woman, wanted recognition quite as much as the prophetess wanted veneration, although she may never have given a plain sign of it to the young man."

THE QUARREL WITH KENNEDY

One evening a game of cards was played in the home of Susie Magoun, now Mrs. Dame. In the game were Kennedy, Mrs. Dame, and Mary Morse Baker Glover. The hand was won by Kennedy, and Mrs. Glover accused him of cheating. That night Kennedy produced his contract, tore it up, and announced that the partnership was at an end. The lady swooned, but Kennedy had apparently learned enough medicine not to take the swoon seriously. He left her to lie where she had fallen, and the next day paid Mrs. Glover \$6,000 in cash as her share of their two years' partnership. Hell has no fury like a woman's scorn. From this moment Mrs. Glover asserted that Kennedy was an evil spirit constantly working against her. She read him out of the party and accused him of sending out adverse mental influences against her. Indeed, she was particularly careful to emphasize the fact that Kennedy was not practicing pure mind medicine but was laying his hands upon the patients. It was at this time that she wrote the following letter, quoted by Joseph Jastrow in *Psychology of Conviction*:

"Among our very first students was the mesmerist aforesaid, who has followed the cause of metaphysical healing as a hound follows his prey. . . . This malpractitioner tried his best to break down our health before we learned the cause of our sufferings.

"His mental malpractice has made him a moral leper that would be shunned as the most prolific cause of sickness and sin, did the sick understand the cause of their relapses and protracted treatment, the husband the loss of the wife, and the mother the death of her child.

"Filled with revenge and evil passions, the malpractitioner can only depend on manipulation, and rubs the heads of patients years together, first incorporating their minds through this process. . . . Through the control this gives the practitioner over patients, he readily reaches the mind of the community to injure another or promote himself, but none can track his foul course.

FADS AND QUACKERY IN HEALING

"Sooner suffer a doctor infected with smallpox¹ to be about you than come under the treatment of one who manipulates his patients' heads."

"The distance from ordinary medical practice to Christian Science is full many a league in the line of light; but to go in healing from the use of inanimate drugs to the misuse of human will power is to drop from the platform of common manhood into the very mire of iniquity."

This was the beginning of Mrs. Glover's doctrine of malicious animal magnetism, a phrase which is merely another name for witchcraft or magic, but an idea which preyed so greatly on the mind of this prophet of healing that she devoted a chapter to it in the third edition of *Science and Health*.

THE PLAGIARISM OF SCIENCE AND HEALTH

There is no doubt that the first manuscript from which Mrs. Glover worked was the Quimby manuscript. To this she constantly added, and again and again the text was re-written either by her alone or by some of the disciples who associated themselves with her. The poor lady's education had never been good, as has been mentioned, and the manuscript shows the effects not only of this lack of education, but also of the many hands that worked upon it. Wherever it seemed to lack in order to meet the needs of some special inquirer, it could always be bolstered up. In the end it represented the creed of Pollyanna that everything is for the best and that one need simply disregard all of the cruelties and facts of life. Just as soon as the leaders found that an aching tooth could be relieved only by extraction, the doctrines were modified to permit extractions. When it was realized that a broken bone would heal properly only after it had good surgical attention, that type of attention was permitted. But little children went on dying of diphtheria while their confused parents sat beside the bed and murmured that "God is love." It is impossible to estimate exactly

¹ The admission that there is such a thing as smallpox infection is, of course, inconsistent with Mrs. Eddy's precepts, as with her many denials of its reality.

how many children may have died through this persistent credulity or ignorance in those to whom they had a right to look for safety, but the number is certainly in the thousands.

There is plenty of evidence that Mrs. Glover developed her system of science from the Quimby technic. There is even a letter which she wrote to Julius A. Dresser, successor to Quimby, begging him to heal her of her spinal affliction by the Quimby technic. By 1880 the lady had even begun to deny the existence of Quimby.

MRS. GLOVER PASSES THE CLIMACTERIC

Whenever she wanted to indulge in some remarkable exacerbation of her personality she could find excuse for it in a revelation from her special providence. Now, at 55 years of age, she indulged in what all physicians recognize as the peculiar mental changes associated with women at the climacteric. The records of every type of faith healing and magic in medicine provide thousands of cases of women who at this stage in their lives developed complaints which are largely mental reflections of their physical condition, and who have been healed by the methods of magic. Stefan Zweig is convinced that there was always something wrong with the sex life of Mary Baker, "as was plainly shown by her indifference (almost detestation) in the matter of her only child, and by her repeated endeavours to compensate for this lack of maternal feeling by marrying or adopting young men." Obviously all these pupils looked upon her as a goddess and followed her in mute adoration.

DANIEL HARRISON SPOFFORD AND ASA GILBERT EDDY

Following Kennedy, there came into her life Daniel Harrison Spofford, affectionately called "Harry" by the high priestess of mind healing. On December 30, 1876, she wrote to Spofford, "Now, Dr. Spofford, won't you exercise reason and let me live, or will you kill me? Your mind is just what has brought on my relapse and I shall never recover if you do not govern yourself and turn your thoughts wholly away from me. Do not think of returning to me again. I shall

never again trust a man. They know not what manner of temptations assail. God produces the separation and I must submit to it so must you."

Twenty-four hours later, however, Spofford received a message to the effect that the lady of his bosom was about to marry a friend to whom he had introduced her, Asa Gilbert Eddy. Eddy was a bible and sewing machine agent, both good occupations at a time when the United States was overwhelmed with agents selling sewing machines from door to door on the installment plan. He was a quiet, self-effacing, unassuming person; indeed, his sister said of him that he could do up his own shirts as well as any woman—just the type for a dominant personality like that of Mary Morse Baker Glover Patterson. It is interesting that the weakest of all her spouses should have conferred upon her the name by which she is now and will forever be known to all the world. On the marriage certificate both partners gave their ages as 40 which fooled no one, not even themselves.

Mrs. Eddy had thought a great deal of Daniel Harrison Spofford, but her temperament was such that those whom she could not love she hated. Now that she was married to Eddy, the wrath that had previously been bestowed on Kennedy was thrown to Spofford, even though she had given him the gold pen with which she insisted that she had first written *Science and Health*. She now pursued him with malice that is typical of her type of mentality. In 1878 at Salem, Massachusetts, noted for its trials for witchcraft, suit was brought against Daniel Harrison Spofford, charging him with malicious animal magnetism. His attorney pleaded that it was not in the power of the law to control a man's mind, and the hearing was dismissed. One night Daniel Spofford was seized upon in the streets and beaten; indeed, given what is now called the "Chicago treatment." His response was to bring suit for damages—and he had damages—against Eddy. It was wise to resort to the law. Our present charlatans continually resort to the law as a means of justification and for the publicity that it will bring. Mrs. Mary Morse Baker Glover Patterson Eddy was always in the courts, in-

deed so frequently that the judges used to welcome her with smiles on each new appearance.

She passed through all of the vicissitudes of every cultist leader. Sometimes her disciples withdrew in a body, but invariably they or others returned. In 1882, when she was over 60 years of age, because of difficulties with some of her associates in Lynn, she removed to Boston. In the same year there passed from this world her last official husband, Asa Gilbert Eddy. He died of heart disease, which must have been a great disappointment to the lady who maintained that disease was just a figment of the imagination. At this time her battered mind developed the notion that Eddy had been destroyed by her enemies, so she insisted on a post-mortem, which revealed endocarditis and myocarditis, a destruction of the inner lining and of the muscles of the heart, due undoubtedly to infection. The lady refused to accept the scientific evidence of post-mortem examination. She insisted that he had been murdered by metaphysical arsenic or mental poison, and in an interview with the Boston *Post* she reiterated that it was "mesmeric poison" that had destroyed her husband.

REJUVENATION AT SIXTY-ONE

At 61 years of age most women are content, even in these modern times when grandmothers, in short skirts and with the aid of the beauty parlor, prance about in night clubs until the early hours of the morning, to spend much of their time resting quietly by the fire. But not Mary Morse Baker Glover Patterson Eddy! At this age she was just beginning to develop her magnificent organization in Boston. She purchased a three-story mansion, installed a lecture theater, marked her door with a silver plate. She read regularly on Sundays in her church and founded her monthly paper for the spreading of her propaganda. Each of the healers who went forth were agents for her magazine and her bible. Money poured in steadily and the doctrine grew. All sorts of subsidies were developed and the great central organization profited by each of them. The articles for sale included

FADS AND QUACKERY IN HEALING

authentic photographs of the prophetess at \$5 each, pamphlets, badges and books. There were even "Christian science" spoons, for this was the time of the spoon fad in the United States. These spoons carried Mrs. Eddy's portrait in enamel.

Mrs. Eddy loved money, but she loved power even more. Perhaps money to her meant nothing but power, but from this time on money seems to have been the driving motive of her life. In the seventieth year of her life she retired to her home in Concord, New Hampshire, from which, however, she issued the edicts which made the final changes in her great organization. At this time preachers in the church were replaced by readers, the mother church was established to receive all funds controlled by a central board of directors, and there was a definite understanding that the capital could not be spent but only the income.

At this age she naturally began to suffer with pains that come to all the aged. There is plenty of evidence that she had her pains alleviated by the methods usually adopted by medical science; the prescriptions for morphine are available, showing how she secured relief.

FOSTER EDDY AND CALVIN A. FRYE

Still perhaps driven by the motives which had dominated her earlier life, she now adopted a homeopathic physician named Dr. Ebenezer J. Foster and renamed him Foster Eddy. But when she heard that Foster had become occasionally addicted to interest in somewhat younger ladies, she parted company with him, and turned to the factotum who dominated her in the concluding years of her life, Calvin A. Frye. He it was who kept her books, served as a footman when she went out driving, gave her injections of morphine, and guided and dominated completely her closing years. She spoke of him constantly as "the most disagreeable man that can be found," but their relationship was perhaps of that masochistic type which makes the servant delight in his inferiority, but makes him actually master of the one he serves.

THE APOTHEOSIS

In 1902, just before she died, Mrs. Eddy raised \$2,000,000 for the building of the great church in Boston. In 1906 the church was dedicated, and delegates from all over the world attended the triumph. Mrs. Eddy did not attend. She thought it better perhaps not to have the world see her physically a wreck, mentally failing, about to die. Since the enemies of her church now made the charge that this woman who had denied physical existence was herself about to succumb to mortal destruction, arrangements were made for an interview with representatives of the press at her home in Concord. The arts of beautification, subsequently to be described in this volume, had not yet been developed to their present high standing. The arts that permit Fanny Ward, Sophie Tucker, and other somewhat ancient performers on the public stage to have the appearance of youth had not been made available. Mrs. Eddy appeared rouged, powdered, and decorated with a diamond necklace, ermine cloak, and ostrich plumes, but with all these accompaniments she was merely the shadow of a being.

Each day she used to drive through the streets that the faithful might look upon her. One day an adventurous reporter from the New York *World* leaped on the step of the carriage, took the umbrella from the hand of the woman, and discovered that not Mrs. Eddy but her maid, dressed to resemble Mrs. Eddy, was receiving the adoration of the faithful.

When she died and her remains were conveyed to their place of burial, it was found necessary to have one engine precede and one follow her last conveyance so that the body might be protected from any material accident.

CHRISTIAN SCIENCE HEALERS

Christian Science is of interest in this outline of medical follies for its demonstration of the life of a great cultist leader who is perhaps typical in her life of all cultist leaders, and second because of the number of healers who practice

mental medicine in the United States. A recent survey by Dr. Louis S. Reed indicates that there are in the United States today approximately 8,848 practitioners located in every state of the Union, but primarily in California where there are 1,887, or 34 to every one hundred thousand inhabitants. The District of Columbia, Colorado, New Hampshire, Massachusetts, and Illinois also have large numbers in proportion to their populations. Most of the healers are located in the large cities rather than in rural districts. Strangely enough there are 441 Christian Science nurses who coöperate with the practitioners. Another interesting fact is the indication that 90 per cent of all Christian Science practitioners are women. Whether this is due to the influence of the high priestess in the establishment of the cult, or whether it is due to the fact that few healers practice their belief as a full time occupation it is difficult to say. Certainly the big money makers in many instances are men who practice their art on the ladies of leisure to whom the attentions of the faith healer are merely a method of occupying the mind—or maybe not only the mind.

It has been estimated that there are approximately 2,000,000 of the 120,000,000 people in the United States who are affiliated with Christian Science, and that altogether there are some 10,000,000 of our people who think first of faith and second of science in time of disease. Personally I have no wish to interfere with any adult choosing any method of healing that he may desire, but I burn with anger when I learn of a father or a mother who has sat solemnly by a bedside mumbling Mary Eddy's metaphysics while a child slowly strangles to death with diphtheria. There is plenty of evidence that many hundreds of misguided Christian Science parents have sat in exactly that manner and watched their children die.

Christian Science happens to be a woman's religion. Out of 137,000 members, 103,000 were women. This may be contrasted with the two-thirds to one-third proportion that exists in the Episcopal and Presbyterian churches and the

almost even number of men and women associated in the Catholic church.

Until recent years, Christian Science, through its business methods, was able to dominate the press so that newspapers would print no word of criticism, magazines no articles of sensation, and publishers no books of facts. Within the last few years the censorship has been broken, culminating in the famous volume by Edwin Franden Dakin, entitled *Mrs. Eddy, the Biography of a Virginal Mind*, in 1930. The Dakin book reveals all of the facts of Mrs. Eddy's life. An attempt was made by the Christian Science church to prevent its sale and indeed to buy up the books, but without success. Today it is even to be found on drug store book counters and can be bought for a dollar. The response of the church was to republish the so-called authentic biography by Sybil Wilbur, which is a glorification of the high priestess and to permit C. Lyman Powell, who had once written a somewhat skeptical biography, to rewrite his book as a saccharinelike appreciation of Christian Science.

The investigations of Doctor Reed indicate that the average income of Christian Science healers is approximately \$1,500 a year net.

CHRISTIAN SCIENCE OFFSHOOTS

As a whole the people of the United States spend \$9,000,000 annually in this form of healing. With Christian Science, however, have come some thirty-five or more other forms of mental healing, many of them including the word "science" associated with some other term. There is, for instance, "Divine science," "Applied science," and "Unified science," and New York City has a "Jewish science." The latter has its bible, a book called *Jewish Science and Health, with a Key to the Scriptures*. Its founder is Rabbi Morris Lichtenstein, who began the cult in 1922, with the idea, no doubt, that it was hardly fair for the gentiles to have a monopoly on this system of easy money.

The Church of the Universal Design is an outgrowth of Christian Science. New Thought seems to include all of the

modern religious healing cults as represented not only by International New Thought Alliance, but also by Divine Science, Home of Truth, Practical Christianity, the Church of the Truth, the Emmanuel Movement, and Christ Psychology. In Kansas City, the Unity movement, begun in 1886, broadcasts health over the radio by the mind method and publishes vast numbers of books, periodicals, and pamphlets. Constantly in the healing room one hundred healers sit broadcasting prayers for those who write in requesting help.

Absent treatment is perhaps one of the most astounding of all of the accompaniments of mind healing methods. There is actually on record an instance of a woman who, after being treated by a Christian Science healer in California, returned home, making a contract with the healer to continue the absent treatment for another year. The woman unfortunately died three months after returning home, but the healer continued the absent treatments for the term of the contract. Then he tried to collect from her estate for the absent treatment given to her for nine months after her death. No doubt, the treatments did her a great deal of good wherever she happened to be during those nine months. He argued that he had fulfilled his part of the contract and was therefore entitled to his fee. In failing to live for the term of the contract, she had merely failed to fulfil her part of the agreement.

OFFSHOOTS OF FAITH HEALING

"Men who have withstood the many buffettings of life without faltering, but also without looking beyond, are panic-stricken, and tremble at the restful vision of the release into forgetfulness."

—Georges Clemenceau, "In the Evening of My Thought."

OUT of Christian Science and New Thought have come a variety of faith healers who depend wholly on the power of suggestion for their results. The manipulative healers depend on the power of suggestion but they also practice the laying on of hands. The naturopaths depend on the power of suggestion but they recognize the virtues of fresh air, sunlight, and frequent baths. No doubt the modern psychoanalysts also and, indeed, even the psychotherapists depend much on the power of suggestion, but they at least know what they are doing and are under no illusions as to a divine background or a religious inspiration. The doctrines which follow represent systems of faith healing with cultist leaders who exploited the system for personal gain.

CHRISTIAN PHILOSOPHERS

The Christian Philosophical Institute, Wilbert LeRoy Casper, D.C., Ph.D., Bishop, has held forth in Oakland, California. It advertised health-happiness-prosperity, personally or by mail. Private treatments were \$10 a month, group treatments by the Watch-Tower staff \$1 a month. The first consultation is with "Dr. Casper who, for his own satisfaction, uses the Sixth Sense method of mental discernment in locating the patient's ailments." Casper plays the cult game

FADS AND QUACKERY IN HEALING

clear across the board. He grants degrees of D.D. and C.P. in six months, conferring a beautiful diploma. The D.D. was \$50; C.P., \$100. He promoted a moving picture called the *Kingdom of Human Hearts*. The lady who played the rôle of "Faith" sued him for \$6,255 back salary as secretary and actress. In 1924 he went bankrupt, listing his assets as 12 collection boxes, 12 collection bottles, 11 boxes of posters, and a painting eight feet square (value unknown). When he ran afoul of the law, testimony indicated his connection with certain osteopaths. He practiced obstetrics, endeavoring to conjure forth the child by dancing about, laying on hands, and boisterous conduct generally.

CHURCH OF THE UNIVERSAL DESIGN

This group, formerly known as the Christian Science Parent Church, is headed by John V. Dittemore, formerly a director in Mrs. Eddy's great organization. It represents a secession from the central group and is unique in advocating coöperation with physicians. Indeed, it offered two physicians the coöperation of its practitioners should they wish to avail themselves of such service.

COUÉISM

Out of France, heralded by such exploitation as was never before given to the introduction of any new system of healing, came Emile Coué, druggist, of Nancy. The system that he urged was "Self-Mastery by Conscious Autosuggestion." According to Coué, the power to control the activities of the body by autosuggestion is, like sin, an original endowment. Every human being possesses it at birth, and if one knows how to practice it consciously one may bring physical health to the sick, moral health to the neurotic and erring, and guide into right paths those who incline to dalliance along the primrose way.

Among the testimonials published by Coué and his followers were claims for the cure of organic heart disease, tuberculosis, asthma, prolapse of the uterus, hunchback, infection of the frontal sinus that had resisted eleven opera-

OFFSHOOTS OF FAITH HEALING

tions, paralysis of the limbs, club foot, bunions, varicose ulcer, and practically everything that made anybody sick, anywhere, any time.

The method of M. Coué was simplicity itself. The patient is instructed as follows:

Every morning before you are fully awake and every evening as soon as you are in bed, close your eyes and murmur twenty times: "Day by day in every way I'm getting better and better." It is well to be provided with a piece of string with twenty knots tied in it so that the counting may be mechanical. Let this autosuggestion be made with confidence and with faith. The greater the confidence, the more rapid and certain the results. Further, each time, whether by day or by night, a physical and moral suffering is experienced, affirm instantly to yourself that you will not consciously encourage its existence and that you can make it disappear. Then, if possible, close your eyes and isolate yourself in thought, pass your hands lightly over the seat of pain, or on the forehead if the suffering be mental, and say as quickly as possible aloud, as long as is necessary, "It's going." On each recurrence of the pain, employ the same method. These exercises must be made with great simplicity and, above all, without effort.

This is, of course, merely Christian Science with reverse English. If the patient has a tumor of the spinal cord, an infection of the heart, or a cancer of the stomach, and if he is under the care of a competent physician, he can do no harm by occupying his spare moments in the mental exercises suggested.

When M. Coué himself conducted the cure the procedure was much more elaborate. Then he emphasized to his people the functioning of every organ, calling each by its name. The prophet actually became lyrical. He told his patients that they would sleep soundly, that their dreams would be pleasant, that troubles and worries would melt away, that they would awaken to sing, not sigh, that there would be no more fears, no more thoughts of unkindness, and that shyness and self-consciousness would vanish. Above all, M. Coué

assured the waiting hundreds that the stomach and intestines would function regularly and copiously. So persuasive were his words that the vice provost of Eton related how, at one of the seances, "hardly had M. Coué finished speaking of the certain cure of constipation when the sufferer he had been addressing hurried from the room, announcing with mingled surprise and triumph that the event was going to justify the prediction." Truly words may move mountains!

Scientifically expressed, the laws of M. Coué were: When the will and the imagination are antagonistic, the imagination always wins. In the conflict between the will and the imagination the force of the imagination is in direct ratio to the square of the will. When the will and the imagination are in one agreement, one is multiplied by the other. The imagination can be directed. To accept any of these laws as established, or as consistent with the established principles of psychology is quite impossible. Moreover, they conflict with common sense and with the facts of human disease as they have been established by medical science.

So, M. Coué came to the United States, heralded by newspaper publicity planned by a great syndicate, whose managers should have known better. During his tour he was featured by radio, by motion picture, by lecture, and by all the other plans that the publicists use for snaring the unwary.

The man himself gave an impression of sincerity and childlike earnestness. He seemed genuinely convinced of his own powers of healing and of the fact that he had made a great contribution to medical science. Of the many cults built on faith healing his was the first that had not been erected on a religious basis with more or less specific claims of divine inspiration, and this, no doubt, was partially responsible for its speedy tendency to oblivion. In one of his meetings in Chicago an elderly woman, emaciated, feeble, short of breath and with every appearance of heart disease was urged, stimulated, and encouraged to walk vigorously. Under the stimulus of the excitement she succeeded temporarily by the exercise of every reserve of energy, and after

having served the purpose of this demonstration she retired from view, panting and exhausted. Later it was found that death had undoubtedly been hastened in several patients by this urging to an activity which the weakened organs could not bear.

The atmosphere of a Coué demonstration was like that of a vaudeville hypnotist; the magic words, the mesmeric passes, and even the old parlor trick of suggesting to members of the audience that they could not separate their hands after they had pressed them tightly together, were utilized to hold attention. And in the background were the crippled, the deformed, and the disappointed dupes decoyed by the careless sensationalism of the press.

"M. Coué gave four performances at Orchestra Hall (in Chicago), seating about 3,700 persons, with a top price of \$2.00," wrote Paul Leach. "On the one side of the footlights, 3,600 persons, there to see a new show, something different to please their appetites satiated with fox-trot dancing, cats and canaries, and Ziegfeld Follies. On the other side of the footlights, the man who earnestly tries to tell them all that he is no miracle worker; behind him more than one hundred cripples. Whether he cures some or not, I have a mental picture of a mother who sat in the front row on the stage, directly behind the man from Nancy, on her knees an eight-year-old boy whose eyes have never seen. The boy sat with bowed head, patiently, now and then twisting his slender fingers, an eager smile on his lips. He had been told he would be made to see.

"There come storms of applause from the other side of the footlights.

"'What is it?' the blind boy asks eagerly.

"'Someone has been cured,' he is told.

"Outside, half an hour later, the boy patiently asks why M. Coué did not make him see with his eyes that have never seen.

"On Saturday M. Coué sails for France, for Nancy. He will probably build himself a new chateau. Fifteen thousand

persons at four Coué performances had a new thrill. The eight-year-old blind boy still sits patiently twisting long fingers and wondering why."

The Nancy to which M. Coué returned to quiet oblivion was the home of a school of scientific hypnotism, under the leadership of the great psychologists Liebeault and Bernheim, famous in the sixth and subsequent decades of the nineteenth century. The abrupt relief of hysterical symptoms by suggestion and persuasion is a commonplace in the practice of the average physician. Unconsciously it is used by every successful doctor in the form of encouragement and optimistic predictions of recovery. It is the basis of the cult of healing brought to high financial power by Mrs. Mary Baker Glover Eddy. As long as there are fools to believe, it can always be made the basis of a successful faith-healing cult. And as long as there are men there will always be believers.

Not long after Coué returned to France he died. He left little of the funds he might have accumulated. Apparently the promoters had taken the lion's share. When the prophet dies, the cult soon passes to purgatory with him, unless, as was the case of Mary Baker Eddy, it has a financial genius to arrange properly for its continuation.

DIVINE SCIENCE

Treatment of illness by "Divine Science" consists in persuading the sufferer that God is good, that disease is the result of man's own foolishness, and that God will cure him if he will give him a chance. These simple doctrines are shrouded, however, in the usual preposterous verbosity. Faith is secured by prayer, with the laying on of hands. The followers of Dowie, Schlatter, Newell, Hickson, Voliva, and more recently John Murray, are the chief disciples of this school of healing.

DOWIEISM

About 1900 Alexander Dowie announced that he was the prophet Elijah returned to earth, although without a chariot.

OFFSHOOTS OF FAITH HEALING

He healed by the laying on of hands. His system was obviously faith healing. As a promoter Dowie was no doubt second only to Mrs. Eddy in this country. He built up a large following, established a city with tremendous industries, and formulated church observances and a ritual sufficient to occupy the minds of those who followed him. Like other prophets of healing he thundered against physicians and attacked preventive vaccination. When he passed on, the holy robes succeeded to Glen Wilbur Voliva, now the czar of Zion City, the Jerusalem of the cult. Voliva thinks the world is flat.

EMMANUEL MOVEMENT

In 1906 the Emmanuel Church Health Class was organized by Dr. Elwood Worcester and Dr. Samuel McComb, rector of Emmanuel Church, an Episcopalian church in Boston. It was planned perhaps as a resisting movement to Eddyism, with a view to combining the knowledge of a physician and the influence of the church in the healing of nervous and mental diseases. The movement spread; other churches were established and books were sold in profusion. As long as it is limited to the mental conditions Emmanuelism probably does little harm. One wonders how far it substitutes a religious interest for some underlying mental habit that is responsible for the illness and that ought to be removed. How far does it fail by overlooking organic causes of mental disease?

JEWISH SCIENCE

Rabbi Morris Lichtenstein, perhaps somewhat jealous of the profits of Christian Science, prepared a book of *Jewish Science and Health* with all of the orotund verbosity of the work which he affected to simulate. He established an elaborate ritual or prayers, a health prayer consisting of two parts: first, the visualization of divine giving and, then, of man's receiving the process of healing and the state of health restored through that process. If any particular organ of the body is affected, the prayer must affirm that health is saturating and obliterating all defection and suffering.

Founded in 1922, this cult has made but little progress since that date. Rabbi Lichtenstein seems to have been overwhelmed by mysticism. He argues that the divine mind communicates with the human mind through the imagination. Therefore, the human mind should never form negative images but must constantly affirm that health is saturating the system. The cult gives opportunity to a few exploiters to become Jewish Science practitioners. These healers offer prayers and induce in the patient a religious, hopeful attitude—and many a hope has been disappointed. The Reverend Lichtenstein wrote to Dr. Louis S. Reed early in 1931, suggesting that most of the cases treated by his group are cases of neurasthenia and general depression. The financial depression which began in 1929 increased tremendously the number of adherents to strange metaphysical doctrines and deluged the country with astrologers, numerologists, fortune tellers, and similar mystics whose sole purpose was to induce hope in those whose belief in life had been destroyed.

LEONIC HEALERS

A group of colored mystics established themselves in New York City and advertised their healing powers under the signs of the zodiac, offering at the same time horoscopic service and direction. The authorities, believing the "Leonic healers" to be more "lyin'" than Leonic, arrested the group and secured the assessment of small fines in municipal courts. The enterprise was shortly abandoned.

NEW THOUGHT

The term "New Thought" covers the teaching of all of the modern healing cults, including Christian Science and Jewish Science. It is, however, promoted through the National New Thought Society and the International New Thought Alliance. Its legitimate predecessor was the "Transcendental Movement" of 1830, and it is influenced by the doctrines of reincarnation and telepathy. Numerous teachers give lectures on relaxation, visualization, accomplishment

and manifestation, and activities with music, rhythmic exercise, "vitalic" breathing, and similar bunk. Hindus and Senegambians costumed like Hindus, have their followers in centers of Yogi philosophy and mysticism. At the last annual convention, ten thousand dreamers were present. The New Thought bible is Ralph Trine's book, *In Tune with the Infinite*, which has passed through several hundred editions.

The New Thought group is, after all, the antecedent not only of Christian Science but of Divine Science, the University of Christ, the Home of Truth, Practical Christianity, the Church of the Truth, Christ's Psychology, and many similar groups. Of late, New Thought has taken into its fold all of the actual Yogis and Hindu philosophers who have toured our country; and many a Senegambian of mixed blood, who has straightened his curly locks by the use of Madam Walker's patented preparations, is showing as a Hindu mystic before some American audience.

The difference between Christian Science and New Thought is much the same as the difference between chiropractic and naturopathy. Chiropractic tells the individual that a bone is pressing on his nerve and must be pulled off. Naturopathy insists that a ligament is responsible and must be pulled off. Christian Science tells its believers to fight and to affirm health. New Thought tells its followers to relax so that the divine spirit may overcome them. Moreover, New Thought has lent itself especially to the great American craze for commercial success. Whereas most other cults emphasize healing, New Thought emphasizes success in business. Among some of the pamphlets recently issued are the following: "Getting On," "Faith and Success," "Dollars Want Me," "Health and Wealth from Within." Its announcements read like those burlesque advertisements in *Ballyhoo*, *Hooey*, and similar publications which begin, "They spoke to me in French, and were they surprised when I answered them!" They have seized on the newer psychology and exploited it to the utmost. One suggestion reads: "Stand up before your mirror every morning and say; 'I'm it, I'm it, I'm as good as you are and a whole lot better.' "

RAWSON'S SCHOOL

F. S. Rawson founded a school in 1919, which works on the negative rather than on the positive principle. The person is supposed to deny vehemently again and again the thing that he does not want. Obviously, this also is Christian Science with reverse English. Some hundred practitioners find it commercially successful.

SCIENTIFIC CHRISTIANITY

With headquarters in Kansas City, this organization publishes *Unity*, with a circulation of 185,000. It sends out lecturers, organizes communities, maintains prayer services, reaching some three to five million people yearly, not counting its recent attempts on the radio. The periodical is full of the usual preposterous testimonials of too credulous victims. A lady in Hot Springs sends a tithe of \$50 because a hail-storm passed over her front yard. The funds come from tithings of 10 per cent. The headquarters in New York is directed by Mr. Richard Lynch, who talks on health, happiness, prosperity, and character formation to from three hundred to five hundred people. In 1923, he had an audience of six. He has probably, however, reached his maximum growth.

What absent treatment is to Christian Science the Unity Movement or Scientific Christianity is to New Thought. Here is the promise, "Health, happiness, and prosperity for a dollar!" This group was founded by Charles and Myrtle Fillmore in 1886. From the headquarters in Kansas City emanate millions of pamphlets. The catalogue says that 1,472,000 books, magazines, and tracts are issued every month. The radio station works constantly broadcasting health to the believers. Ninety workers sit hour after hour offering prayers for those who write requesting help.

SPIRITUALISM

Houdini exposed spiritualism so successfully that only the most credulous are likely to believe in its healing virtues.

OFFSHOOTS OF FAITH HEALING

The beliefs that insanity is due to the poisons of evil spirits and that the ghosts of famous physicians are able to write prescriptions through a medium are so absurd as to merit hardly a moment's attention. Dr. Titus Bull in New York maintains that he has the power to heal by driving out evil spirits through his own saintliness and by the laying on of hands. The idea that there can be anything saintly in this laying on of hands, in the vernacular of the day, is Titus' "bull."

THEOSOPHY

Theosophy embodies telepathy and spiritualism with health interests somewhat secondary. Nevertheless, much is made of the ability to produce relaxation and relief of pain by earnest prayer, a sort of "spiritual anesthetic." A church mission of healing in New York, using this cult, is carried on by the Rev. Thomas Calvert, who has developed his own system of psychoanalysis and complexes, and who will put them to work at \$5 for forty-five minutes, \$10 for ninety minutes, or \$15 for two hours.

One Dr. John D. Quackenbos, with the accent on the first syllable of the last name, claimed that he has cured more than twenty thousand cases of drug addiction by a system of mental maneuvers associated with metaphysical healing.

OSTEOPATHY

"Despite our remarkable advance of knowledge, nonsense is ever becoming bolder and more rampant; it is preëminently a time of fads and crazes, and the question as to how people are to be brought to their senses grows urgent."—W. Duncan McKim.

"For centuries deductions based upon hypotheses have served as the basis upon which the thought and conduct of the human individual have been interpreted."—Stewart Paton.

"ON June 22, 1874," says Andrew Still, in his autobiography, "I flung to the breeze the banner of osteopathy." Before flinging it Still had been a free-lance doctor among the Shawnee Indians in Kansas. "I soon learned to speak their tongue," he says, "and gave them such drugs as white men used, cured most of the cases that I met, and was well received by the Shawnees."

The founder and promulgator of osteopathy, a most extraordinary doctrine of human disease and its causation, was born in Lee County, Virginia, on August 6, 1828. It appears likely that his great-grandfather came to Buncombe County, North Carolina, from England; the almost irrelevant fact is cited merely because of the name of the county. The Still family was early American out of English and Irish, German and Scotch sources. Andrew Still was no accepter of authority even in his youthful days. He refused to attend one school because he and the teacher did not agree. The father of Andrew Still was a minister, doctor, farmer, and millwright; his mother, according to Andrew, was "a natural mechanic, and made cloth, clothing, and pies to perfection." Analyzing the statements it seems probable that Still dis-

OSTEOPATHY

covered these unusual mechanical talents in his ancestry after he himself had developed his mechanical conception of the cause and cure of the ills that flesh may acquire or be heir to.

While traveling about on the frontier Andrew Still became interested in some bones dug up in an Indian graveyard. From his subtle cogitations on these osteological remnants, he became convinced that the bones are the most important elements in the functioning of the human body, and that the backbone is the bone of all bones in the control of disease. On this point, in fact, he felt himself the recipient of a divine revelation, as he emphasizes repeatedly in his story of his life. "Have faith in God as an architect and the final triumph of truth, and all will end well," he says; and again: "Osteopathy is the greatest scientific gift of God to man." And still later he wrote:

Osteopathy is simply this: The law of human life is absolute, and I believe that God has placed the remedy for every disease within the material house in which the spirit of life dwells. I believe that the Maker of man has deposited in some part or throughout the whole system of the human body drugs in abundance to cure all infirmities; that all the remedies necessary to health are compounded within the human body. They can be administered by adjusting the body in such manner that the remedies may naturally associate themselves together. And I have never failed to find all these remedies. At times some seemed to be out of reach, but by a close study I always found them. So I hold that man should study and use only the drugs that are found in his own drug-store—that is, in his own body.

There is Andrew Still's conception of his revelation. The belief in private and confidential relationships with the Deity, as has been pointed out, seems to be an inevitable part of the credo of every healing cult that has interfered with the progress of scientific medicine. It is perhaps a necessary ingredient; it lights an inward flame which gives the founder and prophet the power to attract his great hordes of fanatical followers. After all, in this statement

Andrew Still reveals the basis on which are founded the claims of all the healing cults, that they have the power to cure disease. Here he merely expresses his conception of what has been called the *vis medicatrix naturae*, the innate tendency of the body to overcome its afflictions.

In the spring of 1864 two children and an adopted child of Andrew Still died of meningitis. The mental shock to the father was severe. "I propounded to myself the serious questions," he says, "'In sickness has God left man in a world of guessing? Guess what is the matter? What to give, and guess the result? And when dead, guess where he goes?'" In these questions are forecast the dissatisfaction of the man with the ignorance of his time so far as concerns the causes of disease and also his subsequent belief in spiritualism and his own alleged powers of telepathy. Today scientific medicine knows the cause of meningitis; it uses the antimeningococcic serum that has changed a disease with almost one hundred per cent of mortality to one that, seen early and properly treated, has a mortality of only some ten per cent. It is interesting to think that there might have been no osteopathy if the knowledge of the present day had been available for the family of Andrew Still.

The mechanical trend of the mind of the apostle of osteopathy is shown by his devotion to agricultural inventions between 1855 and 1870. He credits himself with the invention of the automatic reaper, telling that representatives of the Wood Mowing Machine Company visited him and appropriated his idea. "Wood had the benefit of my idea in dollars and cents," he says, "and I had the experience." Then, too, he developed a mechanical churn.

EARLY DAYS OF ANDREW STILL

Now it must be borne in mind that for some fifteen years at least Andrew Still had given little if any of his time to the diagnosis and treatment of disease. In his autobiography he tells us that his mind had been busy with anatomy continuously and that finally the great revelation came to him. Early in the sixties he had taken a course of instruction in

OSTEOPATHY

the Kansas City School of Physicians and Surgeons, and had, no doubt, practiced for a while, but the intervention of the Civil War and his subsequent preoccupation with his inventions quite definitely removed him from matters medical. It appears that he tried to introduce osteopathy at Baldwin University in Kansas but the faculty turned him from the door. He went to visit his brother in Missouri, whom he found to be using "seventy-five bottles of morphine annually," and he "got him free from opium." Then he went to Kirksville, Missouri, stayed three months, and in May, 1875, sent for his wife and family. In the preface to his autobiography the sage of osteopathy admits that he may be wrong at times as to places and dates, and at this time he does appear to be a little confused. He places great importance on a case seen and treated in Macon, Missouri, in the autumn of 1874. Here, it appears, he followed a woman with three children on the street and noticed that one child was suffering with what he calls a bloody "flux," so severe that blood was visible all along the sidewalk. He offered to help the woman home with the boy, and he describes pictur-esque the course of the cure:

I picked him up and placed my hand on the small of his back. I found it hot, while the abdomen was cold. The neck and the back of the head were also very warm and the face and nose very cold. This set me to reasoning, for up to that time the most I knew of flux was that it was fatal in a great many cases. I had never before asked myself the question: What is flux? I began to reason about the spinal cord which gives off its motor nerves to the front of the body, its sensory to the back; but that gave no clue to flux. Beginning at the base of the child's brain, I found rigid and loose places in the muscles and ligaments of the whole spine, while the lumbar portion was very much congested and rigid. The thought came to me like a flash, that there might be a strain or some partial dislocation of the bones of the spine or ribs, and that by pressure I could push some of the hot to the cold places, and by so doing adjust the bones and set free the nerve and blood supply to the bowels. On this basis of reasoning I treated the child's spine, and told the mother to report the

next day. She came the next morning with the news that her child was well.

The story possesses all of the features of all of the stories that dramatize the cultist to his followers. Here are the supposedly fatal condition horribly pictured, the sudden revelation, and the immediate cure. What could be more naïve than this pushing about of heat and of cold? And what story could be more ridiculous in the light of our present knowledge of the causes of such conditions as apparently afflicted the boy that Andrew Still describes? Indeed, if anything were lacking, it is promptly supplied in the next phase of the story, namely, the alleged persecution of the prophet by the citizenry of Macon, Missouri.

The apparently miraculous cure of the boy with diarrhea naturally resulted in numerous calls for the services of the adjuster, and he modestly admits that he treated many cases with success. Here is his account of his subsequent persecution:

I soon found myself in possession of a large practice. I was not so much surprised to discover that all kinds of fevers, summer and fall diseases could be cured without drugs as I was to hear that a Methodist preacher had assembled my brother's wife and children for the purpose of prayer. He had turned fool, or was born that way (as many hurried births have in all ages produced idiots), and the old theological blank poured out his idiotic soul to the Lord; telling him that my father was a good man and a saint in heaven, while he was of the opinion that I was a hopeless sinner, and had better have my wind taken away before I got any worse. He stirred up a hurrah and hatred in Macon, which ran to such a stage that those whom he could influence believed I was crazy. Children gave me all the road, because I said I did not believe God was a whisky and opium-drug doctor; that I believed when He made man that He had put as many legs, noses, tongues, and qualities as would be needed for any purpose in life for either remedies or comfort. Because of such arguments I was called an infidel, crank, crazy, and God was advised by such theological hooting owls to kill me and save the lambs.

OSTEOPATHY

The language of the prophet at its best is forceful. In the heat of his ire Andrew decided to move; he departed for Kirksville. "Long since Osteopathy has been given a big welcome in Macon City," he says later. "They weep and mourn because they did not know a true philosophy, and help me build an infirmary there and make Macon the Athens of learning, in the science of Osteopathy, instead of the rival town in an adjoining county." So at Kirksville he stayed, practicing osteopathy and teaching it to his four sons. Finally in 1894 he secured the charter of the American School of Osteopathy, the institution that was to deliver upon the people of the United States some thousands of the ignorant followers of the osteopathic system of diagnosing and treating disease.

THE BASIC CONCEPTION OF OSTEOPATHY

The original divine revelation to Still was that the primary cause of every disease is some interference with the blood supply or nerve function, always caused by a dislocation of one of the small bones which make up the spinal column. This dislocation, he argued, brings about a change in the size of the little openings between the bones, through which the nerves and blood vessels pass. The result, according to Still, is pressure on the nerves and blood vessels, and disease at whatever distant point in the body the nerve or blood vessel may lead to. But this primeval osteopathy, handed down from heaven almost fifty years ago, was a somewhat different osteopathy from that which exists today. The gradual departure from the original tenets by his followers was a disappointment to the inspired founder. In numerous lectures delivered during 1894 and 1895 he remonstrated with them for their growing heterodoxy, and in the *Ladies' Home Journal* in 1908 he was still "believing . . . that the mechanical displacement of the bony vertebrae constitutes most of the lesions causing disease." But even in his own school in Kirksville, Missouri, students were soon being taught to take care of a disturbance affecting the liver by adjusting the spinal column first, then waiting a week, and then adjusting the

FADS AND QUACKERY IN HEALING

liver itself. Still was against all this. The arterial supply to the organ was solely responsible for its health, he claimed, and adjustment of the bones to release the arterial supply would cure whatever disease beset it.

THE OSTEOPATH BRANCHES OUT

The modern osteopath, while still clinging warily to these spinal adjustments, reaches out to embrace all that he can of modern medicine. He attempts electrical treatment, water treatment, massage, anesthesia, even surgery; and when the Harrison and Volstead acts were passed he made desperate efforts to secure the privilege of prescribing narcotics and liquor. The simon-pure theory of Still denies flatly that drugs may have any favorable effect on the course of disease, but the modern osteopath is apparently convinced that chloroform and ether will induce unconsciousness, that morphine and cocaine will relieve or deaden pain, and that the fermented juice of the grape has certain agreeable effects when administered in proper dosage, at proper times, and to good ends. All this must be taken as evidence that the osteopathy of today is essentially an attempt to enter the practice of medicine by the back door.

CHANGES IN MEDICAL EDUCATION

There was a time when the standard of medical education in the United States was a matter for despair. Half-educated plowboys and section hands attended a few sessions of medical lectures and burst forth in the regalia of the physician. The medical schools were shambles. Scientific medicine makes no secret of this; it glories, however, in the fact that it did its own house-cleaning. In 1901, we reiterate, *The Journal of the American Medical Association*, under the editorship of Dr. George H. Simmons, began to publish the appalling facts regarding American medical education. That publication was like the finger of the housewife who writes her name in the dust on the mantelpiece to show the maid where to wipe. The organized medical profession promptly appointed a special committee to investigate the medical

OSTEOPATHY

schools, to establish standards, and to hold the schools up to those standards, once they were established. The weapon used to achieve all this was publicity. School after school, searched out and exposed, either met the standard or passed into limbo. The number in this country dwindled from almost two hundred to less than ninety. The proprietary medical school, conducted for the pecuniary profit of the professors, gave way to the endowed institution which spends on the student far more than his fees. No longer was it possible for those who could hardly read and write to emerge in two years with a medical degree. The American M. D. of today has had a high school education, two to four years of college preparation, four years among the laboratories, lecture rooms and clinics of a well-equipped medical school, and one or two years enforced attendance as an interne in a standardized hospital. Before he can minister to the sick in private practice he must also pass a State examination. The route is a long and difficult one. It is costly. That is one of the chief reasons why there are now osteopaths and other such nondescript healers.

But there are, of course, other reasons. With the advance of medical research, the naïve belief in pills and philters with which the medical profession of the past was afflicted met a crucial test. There came a nearer and nearer approach to an actual science of medicine. Again the physicians did their own house-cleaning. They created a Council on Pharmacy and Chemistry to examine the claims made for all drugs, new and old, and to determine their actual virtues. If what was offered could not pass the test, it was put into an Index Expurgatorius and the facts were published. The public, catching this spirit from the medical profession, began to waver in its allegiance to powders and pills. It thus became psychologically receptive to the claim of the drugless healer that his "system" was superior to drugging. Many such healers went even further. Still, for example, claimed that drugs were not only of no value in the treatment of disease, but even that they were responsible for most diseases.

"SYSTEMS" OF MEDICINE

Let us pause here a moment to consider this matter of "systems." If there is anything the normal American loves, it is a "system." Consider the immense number offered to him month in and month out in the advertising pages of his favorite magazines: systems of mind training, house decorating, salesmanship, motor repairing, mushroom growing, health building, muscle building, eyesight training—systems for everything. If you would see the preposterous lengths to which the business may be carried in the pursuit of health, study the pages of the popular physical culture magazines. Now, scientific medicine offers no such system. It aims, by the utilization of all available knowledge, to determine the cause of disease, and then, by the use of all intelligent methods, to benefit and heal the disease. It does not promulgate any theory or principle to the exclusion of established facts. It does not say, for example, that "all disease arises in the spine and all disease can be healed by manipulating the spine." Neither does it say that all disease arises in the mind and can be removed by manipulating the mind. No doubt the acceptance of such systems by what are said to be intelligent persons is based on the fact that while they are wholly fallacious they are essentially simple. Even a moron knows that when you remove the brake on a motor car the wheels can go round. And when you tell him that there are brakes in the spinal column which keep the blood from flowing freely, or the nerves from functioning properly, he thinks of the brake on the car, and is sure that the idea is right. Imagine that same type of mind trying to understand how a tubercle bacillus, which he has never seen and of which he cannot conceive, makes a cavity within a human lung! As for such matters as the way in which insulin acts to metabolize sugar in diabetes, or the way in which salvarsan controls the insidious spirochaeta pallida—to explain these things to him would be as hopeless as explaining the theory of the well-advertised Professor Einstein. Scientific medicine admits that there are diseases of the mind and diseases of the

OSTEOPATHY

spine, and its practitioners treat the former by mind-healing methods and frequently the latter by braces and supports and other manipulative measures. But scientific medicine does not treat an abscess of the liver by adjusting the back, or a broken leg by attacking the mind. The great fallacy of all the "systems" of disease and their healing lies in this "all or nothing" policy. When that policy runs counter to demonstrable facts the result is invariably disaster.

INTO MEDICINE BY THE BACK DOOR

It was the pride of Andrew Still that a number of States had legally empowered the graduates of his school to practice osteopathy. It is our thesis that osteopathy as it is practiced today is essentially an attempt to get into the practice of medicine by the back door. In 1917, for example, the Supreme Court of Washington convicted a licensed osteopath of practicing medicine without a license because he had treated diseased tonsils by administering an anesthetic, placing a snare around the tonsils, and cutting them out with a knife, after which he administered stypticin to stop bleeding. The court said:

A perusal of the successive catalogues of the schools of osteopathy will show that their teachings are gradually being expanded and that the more modern of them now teach in some degree much that is taught in the older schools of medicine. The parent school has been more marked in this respect than perhaps any of them. It now teaches that in childbirth lacerations, in certain types of congenital deformities, in certain kinds of tumors, etc., surgery must step in, and that surgery must be resorted to for the removal of tissues so badly diseased or degenerated that regeneration is impossible by the process of adjustment. But this advance is modern. In 1909, the time of the enactment of the medical act, it was not in vogue.

In fact, the laws of the various States which have attempted to regulate osteopathy have had a hard time of it to keep pace with the shifts of the osteopath in his attempt

to break into the practice of medicine. The Supreme Court of California, for example, told an osteopath who wanted to practice optometry that he was not licensed to fit glasses. He argued that his license to practice osteopathy under the medical practice act made him a physician and that the optometry law excepted duly licensed physicians. The Court ruled that the law permitted him to practice osteopathy and nothing more.

We have forty-eight States in the Republic and we have forty-eight different medical practice acts. The Federal Government encountered great difficulty in regulating the administration of narcotics because of this lack of uniformity. In some States osteopathy is, by legal enactment, the practice of medicine; in many others it is not. The Treasury Department, facing this conflict, became confused, and finally attempted to solve the problem by issuing the following order: "Osteopaths should be permitted to register and pay special tax under the provisions of the act of December 17, 1914, provided they are registered as physicians or practitioners under the laws of the State and affidavit to that effect is made in the application for registration. . . ." But this decision made the confusion worse than before. The word "practitioners" might include clairvoyants, Christian Scientists, seventh sons of seventh sons, and all the motley crew that prey on the weak and ailing. It might—and often did—include osteopaths.

The evolution of osteopathic practice, as shown by these and many other court decisions and departmental regulations, into something resembling the practice of actual medicine is probably the reason for the relatively slow development of the cult in the matter of numbers and for the outgrowth from it of the malignant tumor, chiropractic, which is apparently about to engulf the mother organism. Osteopathy, growing complex and "scientific," ceases to meet the demand for simplicity. Chiropractic falls into no such error. It appears to be essentially a reversion to the original hypothesis of Andrew Still, so simple that even farm hands can grasp it; indeed, an osteopath, viewing with alarm the in-

OSTEOPATHY

roads of the new cult, has said that "chiropractic is the first three weeks of osteopathy."

In 1908 the adherents of osteopathy claimed that the mother school had graduated 2,765 students, that schools merged with it had shed upon the community another 1,181, and that there was a total of 3,946 osteopaths. According to the United States Census, there were in the United States, in 1920, about 5,030 osteopaths. There were at the same time according to the same figures, 144,977 graduate physicians and surgeons, and 14,774 nondescript healers. Now, for a population of about 105,000,000 persons, that is certainly not a tremendous number of osteopaths. Apparently the public is finding it possible to stagger along fairly well with the attentions of the medical profession, which has been steadily raising its standards of education. It is, indeed, a confession of failure on the part of the cult that it should have departed from its original hypothesis and gradually embraced the adjustment of parts other than the spine, not to mention the use of water, heat, and electricity, and of anesthetics, antiseptics, and narcotics. In fact, a considerable number of its practitioners have even adopted the extraordinary hocus-pocus of Albert Abrams as a part of their diagnostic and therapeutic armamentarium. Imagine what anathema would have been hurled upon the latter group by Andrew Still! How he would have ridiculed this apotheosis of buncombe! At least there is something real about a jolt applied with the thumb and finger to the back or directly to the seat of a throbbing, inflamed organ. But think of what Still would have said, in his peculiarly exalted language, about the diagnosis of disease by hitching up a drop of blood on a piece of blotting paper to a crude and confused mass of electric wiring, connecting this inanimate, impossible electric jumble to a strange subject, and then percussing areas of dullness on this subject, and from them diagnosing disease!

It was, indeed, a weakness of osteopathy that it had ambitions to be a science. When its schools increased their entrance requirements to demand a high-school education—

usually on the insistence by legislators in the form of stringent practice laws—and when they extended their hours of study, the blacksmiths, barbers, motormen, and beauty specialists who sought an easy road to healing turned by the thousands to the chiropractic schools, which demanded no preliminary education for matriculation and guaranteed a diploma to any aspirant who could pay their fees.

THE LAXITY OF REGULATION

Scientific medicine possesses today adequate records of its schools and its practitioners. In the offices of the American Medical Association in Chicago are all the pertinent facts about the medical colleges of the United States—the subjects taught, the hours, the teachers, the pupils. There is a card for every physician in America, and on it is recorded all that is known concerning his qualifications. As one Southern practitioner said on seeing the card devoted to his own record: "Doctor, they've got things on that card that even my wife don't know, and I've been a married man goin' on forty years." Regularly all the medical schools are submitted to a rigid inspection. But nobody knows anything for certain about most of the osteopathic schools or osteopathic practitioners. Even granting that the facts presented by the schools themselves are reliable, hours of study do not necessarily mean hours of training. Truth and scientific facts are not guaranteed by the time spent in instruction but by the reliability of the subject matter taught. And what of the training of the teachers in the colleges of osteopathy: is it perhaps a case of the blind leading the blind? The truth of the osteopathic theory as to the causation of disease has never, of course, been established. If diphtheria bacilli of sufficient virulence and dosage are placed on the membranes of the throat of animal or man, the result is diphtheria. In their absence, no possible dislocation or distortion of bones, muscles, ligaments, blood vessels, or nerves will bring about that result.

FAILURES IN SCIENTIFIC DIAGNOSIS

Here are two quotations from a report written by the editor of an osteopathic magazine; they refer to the death of his own son:

Billie had diphtheria four days before we knew what he had. . . . I had never seen a case of diphtheria before; never even thought of looking at his throat. . . . Dr. — was called the fourth day and diagnosed the trouble at once. He is an M.D.; has had wide experience; has had the training so many of us have not had.

And then later:

I don't understand antitoxin; I can't understand how a poison can cure disease or neutralize poisons. Yet when the death rate is cut from 50 per cent to 10 per cent, isn't it best to be a physician first, and an osteopath second?

Osteopathy, chiropractic, Couéism, Christian Science, every system of healing without regard to established fact, comes a cropper when confronted with the established proof of the diagnosis and treatment of infectious diseases. The case of Billie is an exposure of the fallacy that an individual may be safely permitted to practice a single branch of medicine without first undergoing complete instruction in all the fundamentals of medical science. But when the incompetent undergoes such a complete course of instruction there is revealed to him, alas, the underlying lack of truth in the "system" or cult to which he has been addicted!

Physicians see almost daily in their practice the results of patients peddling their ailments among the variegated assortment of peculiar practitioners. Perhaps none of the cases which might be cited is more striking than the one described by a well-known Eastern neurologist:

Recently I examined a boy, age 17, lying in bed, very weak, extremely emaciated, totally blind, barely able to swallow. The ophthalmoscope (the instrument which the physician uses to look into the back of the eye) revealed double optic atrophy (destruction of the optic nerves). The

history of the case is briefly: failing vision over nine months in the spring and summer of 1920, very severe headaches and frequent attacks of vomiting, often when there was no food in the stomach, and repeatedly convulsive seizures limited to the right leg without loss of consciousness. It was easy to make a diagnosis of brain tumor; but the condition of the patient was such that surgical interference was out of the question. The diagnosis, which seemed perfectly clear, might easily have been made many months ago. The condition of the patient for many months was certainly grave and alarming, and might have suggested to anyone that it needed thorough investigation. During all these months, while the vision was fading and blindness coming on, what did the boy receive? Treatment by an osteopath and then a chiropractor, and then treatment by another peculiar practitioner and still another practitioner, and so on, but never an ophthalmoscopic examination.

THE AUTOBIOGRAPHY OF STILL

The autobiography of Andrew Still was published in 1897; it is a true piece of Americana, remarkable for the crudeness of its style, its florid diction, its religious frenzy and exaltation. It closes with testimonials and tributes solemn and poetical. But in order to get at a little more of the true inwardness of the man, one must consult some of his biographers of the osteopathic faith. "Practically, Dr. Still is a spiritualist," says E. R. Booth. And J. H. Sullivan writes: "I think the most beautiful thought Dr. Still ever gave voice to was that in which he said he believed each red corpuscle in the blood had an intelligence all its own, else how can one explain the fact of a certain red corpuscle journeying on and on, say in a peacock's tail feathers, and finally adding to the particular color, which we know to be a physiological fact." Thus may a master dispenser of hokum inspire his followers.

It is not surprising to find that Andrew Still believed himself possessed of mystical powers. "There are scores of well attested instances in which Dr. Still has shown his power of clairvoyance—perhaps it would be better to say telepathy," says E. R. Booth. "In the case of Dr. Still he seems to have

OSTEOPATHY

inherited this power, if such a thing is possible, from both sides of his family. . . . Most persons who have spent even a short time in Kirksville have heard stories of his power to divine what was taking place elsewhere."

Like many another prophet of healing Andrew Still was eccentric in his habits and in his dress. "Dr. A. T. Still, or as he was familiarly called by those who knew him best, the Old Doctor, was never a very particular man about his dress, or perhaps, it would be nearer the truth to say that he was usually very careless about his personal appearance," says one of his followers. "This seems to be a characteristic of nearly all geniuses." Still, it appears, was fully conscious of the impression made by his habits of attire. While working at one time in front of his house, repairing the brick walk, he was accosted by two ladies who asked him if Dr. Still was at home. He replied in the affirmative and they stated their request to see the doctor. "If you want to see Dr. Still look at me," the great osteopath said, "but if you want to see a fifty dollar suit of clothes and a 'plug hat,' Mother will show them to you, if you will step in the house."

As has been seen he resembled all other leaders of healing cults in his impatience with believers in other "systems" of healing, and he saw no good in any religion except his own. "If because I denounce drugs you call me a Christian Scientist," he said, "go home and take half a glass of castor oil and purge yourself of such notions." "Every advance step in Osteopathy," he said on another occasion, "leads one to greater veneration of the Divine Ruler of the universe." And he resented seriously any insinuation that osteopathy obtained its effects only in so far as it was a system of massage. As to this he said:

Osteopathy absolutely differs from massage. The definition of 'Massage' is masso, to knead: shampooing of the body by special manipulations such as kneading, tapping, stroking, etc. The masseur rubs and kneads the muscles to increase the circulation. The Osteopath never rubs. He takes off any pressure on blood-vessels or nerves by the adjustment of any displacement, whether it be of a bone, cartilage, ligament,

tendon, muscle, or even of the fascia which enfolds all structures; also by relaxing any contracture of muscle or ligament due to displacements, to drafts causing colds, to overwork or nerve exhaustion.

That was the final pronouncement from the osteopathic Athens of America.

MODERN OSTEOPATHY

Today osteopathy concerns itself with the general practice of medicine. Essentially the osteopath is a physician who has come into practice by the back door. In addition to practicing medicine, the osteopath believes that he adjusts what he calls osteopathic lesions. These lesions are presumably abnormalities consisting of slight displacements of the surfaces of the bones at the points where they touch. The osteopath believes that he finds these by feeling the bones, by looking at them, by using the x-ray, and by the patient's own indication of local tenderness. The actual fact of the matter is that, in most instances, these dislocations are not present and, even if they were present, they would not cause the symptoms that are accredited to them.

The osteopath feels that these lesions are associated with diseases in various organs, but he is likely to find the same lesion for all of the different diseases that might concern any one organ. For example, a kidney can be affected by inflammation by Bright's disease, by tuberculosis, by the presence of an abscess, or by a tumor. But the osteopath would find the same trouble in the spine for all of these conditions.

It is, therefore, quite likely that what is called the osteopathic lesion exists only in the mind of the adjuster, and that the manipulations used by the osteopath to correct such lesions represent essentially enhancement of the power of suggestion by the laying on of hands. That idea, as has previously been said, was well known even in Biblical times. The very cases in which, to the patient, osteopathy seems to offer most relief are those in which the patient has some chronic disorder which has not yielded readily to any treat-

OSTEOPATHY

ment, or those in which the condition is benefited by massage and stimulation of the circulation.

Of late, the osteopaths have sought to gain a foothold abroad but their notions have seemed to offer but little appeal to the stolid inhabitants of Great Britain and Germany.

RECENT STATISTICS OF OSTEOPATHY

Of particular interest is the recent investigation made by the Committee on the Costs of Medical Care. This Committee finds that there are some 7,650 osteopaths practicing in the United States, distributed largely in the Far West, California having the greatest number relative to population, with twenty osteopaths to every hundred thousand inhabitants as contrasted with a ratio for the whole United States of six for every hundred thousand inhabitants. California is the osteopathic paradise. In Los Angeles an osteopath is as good as a doctor and he doesn't care who knows it. In fact, he is likely to consider himself much better.

The osteopathic group have a portion of the County Hospital which they conduct but, fortunately for the sick, those with serious illness are likely to be assigned to the medical division, thereby increasing the mortality rates in that division and giving the osteopaths opportunity to crow because of the lower death rates in their own division. When healthful patients are primarily selected as the basis for medical care by any group, that group is certain to show excellent mortality rates.

Incidentally, the osteopaths are much more numerous in towns and small cities than are physicians. They are absent from rural communities and from large cities. The reasons should be obvious. The old laws of supply and demand work immutably. In the large city the osteopath is compelled to meet the opposition of an excellent and well established medical profession. The rural community confronts him with medical emergencies for which his education in no way prepares him. Hence, he locates in the small town where the old, chronic cases of rheumatism and what have you are willing to surrender themselves to his tender mercies.

FADS AND QUACKERY IN HEALING

In 1930 there were still seven osteopathic schools in the United States. In 1927 there were eight. Osteopathic schools, being dependent largely on the incomes from students for their continuance, come and go. Proprietary medical schools have disappeared since the cost of educating a physician is so great in proportion to what students can pay that there is no money in running a sound institute for medical education.

Since 1900 the osteopaths have gradually reached out and helped themselves to most of the therapeutic measures used by medicine. One osteopath discovered obstetrics. It had been going on for many centuries, but he figured he might sit by the bedside and wait as well as a physician or a mid-wife. Hence, obstetrics became a part of the osteopathic curriculum.

Another osteopath in the State of Washington discovered that the tonsils could be reached by anyone with a hook, and he began to jerk tonsils from their resting place in the throat. However, the State of Washington, through its Supreme Court, rendered a decision which prevented him, at least briefly, from embarking into surgery.

Nevertheless, once the osteopath is in practice, he tries to become a physician. A survey of medical facilities in Philadelphia showed that at least fifty per cent of osteopaths were vaccinating people against smallpox, and twenty per cent were immunizing against diphtheria. Today all of the osteopathic colleges teach the use of vaccines, antitoxins, and similar preparations; whereas but ten years ago the editor of the osteopathic journal permitted his son to die of diphtheria without giving him a dose of antitoxin.

At a recent convention of osteopaths the dean of one college urged that osteopaths admit frankly that they are now embracing *materia medica* and really practicing medicine. Since this is the case, the public needs to be concerned with seeing to it that osteopathy does not continue to be a means of getting into medicine by the back door. Osteopaths should be compelled to meet the same requirements that physicians are compelled to meet. Indeed, there should be a minimum

OSTEOPATHY

standard of education for all who propose to heal the sick, regardless of the names which they give themselves or the system which they think they are practicing.

Most of the states in this country specifically provide for the practice of osteopathy. These laws fix minimum educational qualifications, provide for special boards of examiners, and define the limitations under which osteopaths may practice. No two states have laws exactly the same, and in many states osteopaths have been sufficiently influential to secure for themselves practically unlimited scope.

In point of numbers, as is pointed out by Dr. Louis S. Reed in his report to the Committee on the Costs of Medical Care, the growth of osteopathy has practically stopped. The reasons for its failure to grow are two: First, it has ceased to be a medical cult and is merely low grade medicine; second, its place as a medical cult has been taken by chiropractic. As will be revealed in the next chapter, chiropractic was called by an osteopath a tumor on osteopathy which would inevitably engulf the mother organism.

In the practice of medicine as a whole an osteopath cannot compete with a properly trained physician. When he tries to compete he indulges in claims which mark him as a quack and a charlatan. Dr. Reed believes that the osteopaths merely dilute the quality of medical care available to the people of this country. The people should weigh well the question of whether they care to submit themselves and their families to substandard medical care.

WHY PEOPLE GO TO OSTEOPATHS

Well, why do people go to osteopaths anyway? Don't they ever help anybody? People go to osteopaths because they have been directly approached through advertising, in which reputable physicians do not indulge. They go because some friend who has been aided by an osteopath, or thinks he has, has urged them to go. They go when physicians have failed them. Ah! yes. I grant you freely that physicians fail. There are diseases in which science can be of but little service, and if the doctor is honest he will tell you so. I know a woman

who has been suffering eleven years or more with a gradually progressing case of paralysis agitans or shaking palsy. Three eminent neurologists told her ten years ago that her condition was incurable; they prescribed a simple regime of life and told her to save her money for the invalidism of her remaining years. But during the intervening years she has spent every cent of her income on massage, on electric treatment, on nature cures, and on osteopathy, and she is undoubtedly worse. And I am willing to admit that among those who treated her was a physician who should have known better. The incompetent or unprincipled physician, licensed to practice medicine by a too complaisant State, is the greatest menace to scientific medicine—as great a menace as all the cultists put together.

Osteopathic or any other kind of manipulation undoubtedly produces, at times, temporary benefit, or the feeling of benefit. The old-time physician used to put his hands on the patient; he used to work him up a bit, while at the same time he encouraged him mentally. There are many who feel that the modern physician might practice a little more of this laying on of hands. But it does not require any extraordinary mentality to see how serious it is to practice merely the laying on of hands and the conferring of a temporary feeling of benefit when a child is beginning to strangle with the accumulated debris of a diphtheritic membrane, or when the life of a woman is being slowly sapped by an internal, malignant tumor, or when some previously uncautious man is beginning to show the first signs of paralysis and the delusions of grandeur associated with an early encounter with the spirochaeta pallida of syphilis. These are surely no times for the laying on of hands; these are times for accurate diagnosis, and the speedy administration of the life-saving diphtheria antitoxin, the merciful surgical knife, and the destroyers of spirochetes: mercury and salvarsan.

In 1875, when Andrew Still went from Kansas to Kirksville, he found a letter addressed to his brother Edward from another brother, the Rev. James M. Still of Eudora, Kansas, "stating that I was crazy, had lost my mind and

OSTEOPATHY

supply of truth-loving manhood." Still's comment on this letter, taken from his autobiography, offers a remarkable sidelight on the motives of the founder of osteopathy. "I read it," says Still, "and thought, 'As the eagle stirreth up her nest, so stir away, Jim, till your head lets down some of the milk of reason into some of the starved lobes of your brain.' I believed Jim's brain would ripen in time, so I let him pray, until at the end of eighteen years he said: 'Hallelujah, Drew, you are right; *there is money in it*, and I want to study Osteopathy!'" The italics are mine.

CHIROPRACTIC

"Men are usually competent thinkers along the lines of their specialized training only. Within these limits alone are their opinions and judgments valuable; outside of these limits they grope and are lost—usually without knowing it."—Mark Twain.

THE spine is a series of bones running down your back. You sit on one end of it and your head sits on the other." A simple definition and one that is sufficient for the average man! But there is much more to the spine than that. If you don't believe it, ask any chiropractor. In a glib and rhythmical manner that indicates hours of study of what the salesmen call a selling talk he will tell you things about the spine that will astonish you. Imagine, then, the astonishment of scientific anatomists, physiologists, pathologists, and physicians when these amazing views of the spine were first launched upon them by Andrew Still, the founder of osteopathy! It was only later that they were adopted by the chiropractors and elaborated into a comprehensive system of pseudomedicine.

About 1894, or some twenty years after osteopathy first saw the light, the following incident occurred in Davenport, Iowa. The story was told under oath on the witness stand by B. J. Palmer, high priest of chiropractic and son of D. D. Palmer, its founder:

Harvey Lillard was a janitor in the building in which father had his office at that time, in the Ryan Block at Davenport. Harvey came in one day thoroughly deaf. Father asked him how long he had been deaf, and he told him

seventeen years. Father said, "How did this occur?" Harvey said, "I was in a stooped, cramped position, and while in that position I felt something pop, and heard it crack in my back." Father looked him over, laid him down on the cot, and there was a great subluxation on the back. Harvey said he went deaf within two minutes after that popping occurred in the spine, and had been deaf ever since, seventeen years. Father reasoned out the fundamental thought of this thing, which was that if something went wrong in the back and caused deafness, the reduction of that subluxation would cure it. That bump was adjusted, was reduced, and within ten minutes Harvey had his hearing and has had it ever since. He is now janitor in the City Hall in Davenport.

This little tale is inserted that the reader may see just how much credit is given to osteopathy by chiropractic for the idea on which the latter system, like the former, rests. As for Harvey Lillard's deafness—if it was not imaginary—one can only surmise that it was of that order known as hysterical deafness, not due to any organic defect, and curable, as thousands of such cases always have been cured, by any strong suggestion, including the laying on of hands. The osteopaths will tell you that chiropractic is the first three weeks of osteopathy; the chiropractors will insist that there are vital differences between the original tenets of osteopathy and chiropractic, but no neutral student has ever been able to discover those differences. The younger Palmer told on the witness stand how his father, confronted with his experience in the case of Harvey Lillard, arrived by pure logic at the conception of chiropractic. But there is some evidence that the elder Palmer, while practicing as a magnetic healer, also had opportunity to witness the demonstrations of old Dr. Still. So much for the founding of chiropractic!

THE BASIS OF CHIROPRACTIC

The explanation offered by the chiropractor to account for all disease is simple, and hence well calculated to attract the minds of those who like to think for themselves in the absence of facts. When the chiropractor tells his patient that

the brake pressing on the nerve as it emerges from the spinal column keeps the nerve from transmitting the energy that makes the wheels of the body go round properly, the victim is impressed by what he calls "reason." Unfortunately for this "reason," the fundamental facts will not support it. A brake and a wheel are material objects that can be observed; the spinal column and the nerves that emerge from it are also material objects, but they cannot usually be observed. A man tries the brakes on his car and finds that they catch hold and the wheels stop. But let something go wrong under the hood of his car, in some of the internal workings that are beyond his ken, and he will have to take the word of an expert for the fact that the thing is wrong that the expert says is wrong. There have been, as we all know, motor mechanics who were not above taking a little advantage of the car owner's ignorance of its internal mechanism. There are also body mechanics who do not appear to be above taking advantage of the layman's ignorance of the anatomy of his spinal column.

The nerves that emerge from the spinal column are much smaller than the holes between the bones of the column from which they emerge. The space about the nerve is padded with fat and soft tissue. The back may be bent into all sorts of angles and postures—everyone has seen the acrobatic dancer of the stage assume such angles—and yet these nerves are not squeezed or damaged because of the padding with which nature has protected them. Professors of anatomy have dissected thousands of dead bodies and have been unable to find any spinal nerves pinched or compressed in the manner which chiropractors allege is responsible for disease. The X-ray has been used to search for the dislocations which the chiropractors assert are present, but those dislocations cannot be found. Indeed, substances opaque to the X-ray have been injected into the canal within the spinal column, and photographs taken later have shown the fluid passing around the nerves in a manner that would be impossible if these nerves were impinged on by the bony structures with which they are surrounded. Today this method

CHIROPRACTIC

is used to locate accurately tumors of the spine. Moreover, experiments conducted in California have shown that a force of 1,200 to 1,300 pounds, while it will fracture one of the spinal bones, will not dislocate it or cause it to press on the spinal nerves. Thus the fundamental dogma of chiropractic, that disease is caused by dislocations or subluxations of the bones of the spinal column, pressing on nerves, is simply a complete misrepresentation of the demonstrable facts. Any chiropractor who tells an invalid that he is ill for that reason is either willingly deluding the patient or deluding himself.

The action in the chiropractor's office is usually something like the following:

PATIENT: Are you the doctor?

CHIROPRACTOR: I am the doctor. And what's the little difficulty today?

PATIENT: Well, doc, it's this rheumatism I've been sufferin' with.

(Of course it may be a cold, or a sore throat, or diphtheria, or diabetes, or almost anything else that has already been diagnosed, or that the patient, in his rough and ready manner, has essayed to diagnose.)

CHIROPRACTOR: Well, strip off your things and get into the kimono.

PATIENT: How much are the treatments, doc?

CHIROPRACTOR: Two dollars.

PATIENT (Stripped, so far, of clothes only) : All right.

CHIROPRACTOR: Well, I should say so. (Rapidly runs fingers up and down patient's back.) Why, here's a subluxation of the third, fifth, and ninth, and almost a lateral curvature. (The figures might just as well be first, seventh, and twelfth.) Get up here.

(The patient mounts a leather-covered board with pillows at each end, that depresses the spine. The patient is already beginning to feel depressed. Then the chiropractor gives the patient a push in the back, using one hand, two hands, and sometimes the knee, according to what he thinks the system will stand. There are court records of fractures of the

bones brought about by this gentle manipulation, known as the Chiropractic Thrust.)

PATIENT: Go a little easy there, doc.

CHIROPRACTOR: We've got to get these little dislocations back into place. Now turn over on your back. (The chiropractor now jerks the patient's head until his neck cracks or pulls his leg, depending on the particular school of chiropractic in which he was instructed.)

PATIENT: Doc, I heard that crack. I think I feel better.

CHIROPRACTOR: Well, yours is a pretty difficult case. Those bones may slip out again. It may take a series of treatments. Lessee, this is Chuesday; come in about Thoisdhay. Yeh, make it Thoisdhay an' bring a kimono. I'll give you a locker for it. Yes, two dollars for the treatment an' a dollar rental for the locker.

Thus chiropractic diagnosis and treatment. Disease is caused by certain bones of the spine impinging on certain nerves. Disease is cured by pushing those bones off those nerves until by some unknown mechanism of physiology they are persuaded to stay off.

THE CHIROPRACTIC FOUNTAINHEAD

The "fountainhead" of chiropractic is at Davenport, Iowa, and B. J. Palmer is its prophet. It is not always well to go directly to an individual for an evaluation of his attainments, but Palmer explained his on the witness stand some years ago. We may accept the record as representing the most that he could give himself. On December 22, 1910, a chiropractor was placed on trial in Milwaukee, and Palmer appeared in his behalf. In the course of his testimony, Palmer told the court that he had learned chiropractic from his father, that he was at the time of testifying twenty-eight years of age, and that at the age of twelve he was in the field as a practitioner of this strange art. He had attended common grade school at Davenport, Iowa. He said in one place, "At the age of eleven I was kicked from home, forced to make my living," and in another that his education had been chiefly "common sense" and "horse reasoning." Be-

yond that he had "graduated from the Palmer School of Chiropractic under my father" and had "studied art some in Chicago, not very long . . . landscape work, painting . . . I have studied music."

Now as a result of all this delving into knowledge, with what degree did Palmer decorate himself in the annual announcements of his college? It appeared that he had the degrees of D. C. and Ph. C., conferred by the Palmer School of Chiropractic, which he owned. And after his name appeared: "Is a student, author, lecturer and teacher on any phase of chiropractic philosophy, science or art anywhere any time." He was also described as the developer of the philosophy, science and art of chiropractic; author of many volumes on the science, art, and philosophy of chiropractic; secretary and philosophical counsel to the Universal Chiropractors' Association, honorary member of the German-American Chiropractors' Association, secretary of the Iowa Chiropractors' Association, counsel for the P. S. C. (Palmer School of Chiropractic), and manager and assistant editor of the *Chiropractor*. And it was further said of him that "one of his aims in life is to be a Therapeutical Idol Shatterer" and "destroyer of superstitious ideas regarding man, and replacer of practical studies."

From the evidence in the case cited it became quite clear that in the Palmer School, as conducted by the elder Palmer, anyone could embark on the study of chiropractic. It was not even necessary that he be able to read and write. The standard, by 1910, was higher. No primary education was required, but B. J. Palmer said that "each student must have a brain and know how to use it." Every student was required to spend twelve months, totaling twenty-seven hundred hours, in the college before he got a diploma. If he passed his examinations with a degree of 98 per cent, he was awarded the degree of Ph. C. But when Dr. Thomas F. Duhigg reported the results of an inspection of the schools of Davenport for the Pennsylvania Bureau of Medical Education and Licensure he pointed out that in 1915 the three colleges which had developed in that capital of chiropractic

were really little fit to educate anybody in anything. None had a library, a hospital, a laboratory worthy of the name, post-mortems, or capable teachers. To these institutions came students without preliminary education, and after one year of study in miserably equipped buildings, consisting mostly of lecture halls and demonstration rooms, they were turned loose to minister to the sick.

Low as were the requirements of the fountainhead school and some of its Iowa offshoots, chiropractic colleges established by exploiters in other states were not even one half so particular. The following letter, bearing all the evidence in its writing and general appearance of having come from an ignorant and illiterate woman, was sent from a town in Texas to the Carver Chiropractic College in Oklahoma City:

Sirs, Mister Kirpatic School. I want to rite letter and see if i can be kirpatic dr. if you can make a kirpatic dr. for how much money I got about 2 thousand dolers that my husband got when he died from the insurance company that paid 3 thousand dolers but I had ode lot of money and funerl and everything cost more 1 thousand dolers. Could i be kirpatic dr., for this much money about 2 thousand dolers in bank. I been nurse some and help drs. and kirpatic dr say i am strong and pretty and i make a good kirpatic dr. since my husband die I can live with my ant here in _____ but it is my money in bank. My ant say i have not been in school enuff but my father live on ranch an work wen I was girl and I go to school 3 years. My husband die with apensis in his side and drs. say it to late after they operate an lots of pus and kirpatic dr. say he could cure him if he had called him but i did not no it that is why i did not send for him an i want to be kirpatic dr so i can cure apensis sometime. I been ritin some other kirpatic schools and kirpatic colleges but they send me books and dont anser my letter so i can no. if you will anser my letter an tell me if you can make me a kirpatic dr. on how much money i got an how long it will be if i am a widow 24 years old and i will come right away.

Mrs. _____ Texas.

Had this erudite document been received by any medical school in the United States the writer would have been in-

formed kindly but firmly that she was obviously not the possessor of sufficient fundamental learning to warrant her undertaking the diagnosing and treating of human ailments as a life occupation. The Carver Chiropractic College, however, was in no way subject to any qualms. After all, two thousand dollars is not to be sneezed at. Following is the Carver reply:

Dear Madam: Your most interesting letter stating that you were very much interested in the study of the subject of Chiropractic and reciting the incidence (Sic!) leading to the death of your husband and the information that you had received from some of your Chiropractic Doctor friends that his death was all unnecessary, had a Chiropractic Doctor waited on him instead of an M.D. I think you are entirely correct, however, that is an incidence (Sic!) That is a condition we must all meet. While it grieves us to give up the ones we love, your husband showed forethought in providing for you in a way and I can not think of a better means to put your money to than preparing yourself for a real life's work.

Chiropractic is a profession based upon a science. While your education may be limited you have the intelligence and the determination and sufficient education to understand the English language you would have no difficulty in getting a knowledge of this subject so that you could go out and practice and be efficient. You can enter at any time and in eighteen months, upon making your grades, can be graduated. If you can come at once it will be well for you to do so, but if not, make your arrangements to be here sure by the first Monday in April. Living conditions here are very reasonable. You will find no difficulty in getting good and economical living quarters. We will do what we can to help you when you come. You will find the student body a fine working, virile body. Oklahoma City is a city of 125,000 which offers the advantages of a city of this size and you will enjoy life while here.

I am sending you a catalogue under separate cover which will give you all the information I have not given you in this letter.

FADS AND QUACKERY IN HEALING

Trusting that we will hear from you or see you in a short time, I am.

Very truly,
CARVER CHIROPRACTIC COLLEGE
H. E. Thompson.

It would be possible to marshal innumerable examples of the crudity of chiropractic literature. An analysis of any considerable mass of this material reveals at once the fact that such of it as is sound from a grammatical point of view is florid with the phraseology of the writer of modern advertising blurbs; that which has not had such censorship is almost invariably full of misspelled words and specimens of grammar that would excite the derision of a fifth grade scholar from any elementary school. The acme of chiropractic diction was no doubt reached in the following definition which constitutes a part of the act regulating chiropractic signed in 1920 by the Governor of New Jersey.

DEFINITION OF CHIROPRACTIC: *The term *chiropractic* when used in this act shall be construed to mean and be the name given to the study and application of a universal philosophy of biology, theology, theosophy, health, disease, death, the science of the cause of disease and art of permitting the restoration of the triune relationships between all attributes necessary to normal composite forms, to harmonious quantities and qualities by placing in juxtaposition the abnormal concrete positions of definite mechanical portions with each other by hand, thus correcting all subluxations of the articulations of the spinal column, for the purpose of permitting the recreation of all normal cyclic currents through nerves that were formerly not permitted to be transmitted, through impingement, but have now assumed their normal size and capacity for conduction as they emanate through intervertebral foramina—the expressions of which were formerly excessive or partially lacking—named disease.*

When Dr. George Dock visited the fountainhead of chiropractic in 1921, he found the business of training practitioners of chiropractic a most flourishing one. Palmer's orig-

inal plant had expanded into a series of buildings devoted to the teaching of some three thousand aspirants annually, at a cost of several hundred dollars each. But the large buildings, Dock reported, were still not devoted to teaching any of the fundamental facts of physiology, pathology, bacteriology, or even hygiene and sanitation. There were classrooms seating from 300 to 500 students in which the lecture method was used to force home the ideas of B. J. Palmer, Mrs. Palmer, and their colleagues of the faculty. The walls bore trite epigrams and aphorisms earnestly beseeching the students to give ear to the words of the prophet. There were a cafeteria, a printing plant, a private branch post office and express service, a room containing specimens of bone lesions, and a roof garden. More recently there has been established Station WOC, which radios chiropractic philosophy to prospective patients, the while it dispenses the usual form of aerial entertainment. This station is more egregious in its splendor, Harry Hansen informs me, than anything he has seen except the station conducted by Roxy in New York.

It would seem that the chiropractic course has now lengthened—presumably with the advance in chiropractic knowledge—to three years of six months each, although arrangements may still be made to take the whole eighteen months straight through. In this course, alleged to be of 5,335 class hours, the student is taught the philosophy of chiropractic, how to use the chiropractic thrust, how to adjust patients, something about obstetrics, and more about salesmanship. With from three to five thousand students annually paying from \$350 to \$500 each, it can be readily seen that the business does not exactly lose money.

Consider now the length of the terms of the ordinary medical school, the expensive equipment of its laboratories, and its large staff of professors in the various fundamental branches and medical specialties. At once it will be realized why the medical school requires State or philanthropic support for its maintenance, and why the ignorant and unequipped aspirant who wants to embark on a career of healing will choose chiropractic, with its eighteen months of

lectures, instead of medicine with its preliminary high school and college education, its four years in the medical school, and its one to two years of internship in a hospital. Incidentally, in the medical schools, there is no course in salesmanship.

As may well be imagined, chiropractors have multiplied. And as they have multiplied, so also have chiropractic schools. In 1920 B. J. Palmer made a speech at a convention of chiropractors in Butte, Montana. The astute B. J. was a little incautious, or perhaps the wine of fame had gone a little to his head. For he said:

Our school back at Davenport is established on a business and not a professional basis. It is a business where we manufacture chiropractors. They have got to work just like machinery. A course of salesmanship goes along with their training. We teach them the idea and then we show them how to sell it.

This phase of chiropractic education has become more and more important. Indeed, advertising concerns have been formed for no other purpose than to aid the chiropractor in reaching his prospective patients. One such organization in Indiana is frank:

To advertise inside the chiropractic, medical and truth laws, requires some adroitness, some ingenuity of expression, some more than common ability as a wordsmith.

The advertising matter of the exponents of the chiropractic art has provided amusement to thousands since first it burst upon the American scene. In 1921 the Idaho Falls *Times-Register* displayed the announcement of the Busby Chiropractic Specialists. It was headed in black-faced type: "Why His Wife Left Him." It told of the case of one Jack who "never had a smile for his wife" and "was grouchy with the baby." Mrs. Jack thought he had ceased to love her because he desired to sleep alone. As a matter of fact, the Busby Chiropractors inform us, he did love her "but, due to nerve pressure in the spinal column, he was not normal sexually." Mrs. Jack did not know this and in time she left

him. "A happy home could have been made if he had gone to the Busby Chiropractic Specialists and had those vertebrae adjusted to normal."

The pleasant little item that has been cited appeared on the "Society and Personal" page of the paper as being, perhaps, especially suitable for home reading. It is matched only by the chiropractic testimonial for which the *Chicago Tribune* vouches:

Dear Doctor.—Before taking Chiropractic and Electric treatments, I was so nervous that nobody could sleep with me. After taking six treatments anybody can sleep with me.

A few years ago the press made much of the story of the "talking girl" of Waukegan who had been cured after talking seven days and nights. Medical practitioners, it was stated, had failed and then the chiropractor had achieved a successful result. It made a good newspaper story, especially for those newspapers that saw in it the opportunity to suggest to the chiropractic fraternity that their business had been given a magnificent boost in the news column, and that it was highly desirable that they should add to this free advertising momentum an additional urge through the advertising pages. Rate card enclosed! Briefly, the child did not suffer from so-called "talking sickness"; the alleged adjustment of the spine did not "cure" the "sickness" and, finally, the child had not completely recovered. The case was one of epidemic encephalitis, with a temperature ranging between 99 and 103 and active delirium, inequality of the pupils, and strabismus. The improvement was gradual and that incident to the ordinarily observed progress of the disease. As shown by the case record, the chiropractor's "treatment" did not modify the course of the disease. The "talking" had ceased at intervals previous to his visit and continued at intervals after his "treatment." But the publicity given the case offered great opportunities for advertising, and advertising is an important part of the chiropractic curriculum. In fact, the child never completely recovered from the disease.

CHIROPRACTIC ORGANIZATION

It is an aphorism that where there is money there is power. Expensive legal organizations were early established for taking care of the chiropractor who fell afoul of the laws governing the healing art. Funds were established for releasing him when he chanced to be the victim of an enforced rest behind the bars. The usual committees for lobbying protective legislation through State and national legislative bodies began to function—and it must be said for them that they have functioned efficiently in most cases. Already chiropractic is legally established in many States, and apparently immune to prosecution in those where it still flourishes without legal warrant.

In the meantime, B. J. has not been idle. His fertile mind saw that chiropractic must grow if it was to survive. In 1910 he testified that he would not adjust the vertebra of a dog for a stomach-ache or yelping at night. "I think I would use a shotgun in that case," said B. J. But in 1921, chiropractors were adjusting mules that refused to get up and cows that were somewhat swelled. But in this bright land of the free trifling with the health of the animal seems to be a much more serious matter than offering treatment to one's fellow citizens. Chiropractic veterinarianism has not yet become popular.

Those who have taken at least a casual interest in medical quackery will remember that one Albert Abrams, of California, some years before his death propounded an entirely new method of diagnosing and treating disease, the same having to do with certain vibrations, currents and ohms, and a mumbo jumbo of pseudoelectrical nomenclature. The osteopaths, struggling against the flood of chiropractic sewage which threatened to engulf them, saw in the Abrams method an opportunity for a new lease of life. Many osteopaths hailed its coming with shrieks of happiness, both in the public press and directly to their clientele. And the exceedingly clever Dr. Abrams, knowing the superior flavor that attaches to exclusiveness, announced early in his exploi-

CHIROPRACTIC

tation of the "oscilloclast" and the other oscillating devices with which his name was connected, that their use would be limited to physicians and osteopaths. The humble chiropractor was to be excluded.

Now, the astute B. J. Palmer is not averse to taking a leaf from some other man's book. As has been mentioned, his esteemed ancestor, the magnetic healer, adopted certain principles promulgated by Dr. Andrew Still. So B. J. suddenly appeared on the horizon with a little device of his own called the "neurocalometer"—"the little wonder instrument which so accurately locates impinged nerves." B. J. is too wise to discard chiropractic ideas in favor of any theory of vibrations, and thus to sacrifice the identity of his hereditary science. But he does develop "a little wonder instrument" to put on the spine to tell the chiropractor where to do his pushing. In a letter issued from the chiropractic fountain-head on December 15, 1924, a prospective student was urged to enroll promptly in order to take advantage of current prices on this device:

The neurocalometer is not sold, but is leased for a period of ten years. As you may know, the original lease price for ten years was \$620, soon increased to \$1,200, later to \$1,500, and then to the present price of \$2,200, with the prospect of an increase at an early date to \$3,000.

But if the aspirant for chiropractic honors would enroll in the January, 1925, class at Davenport (either cash or deferred payment), he was told, he could get a neurocalometer with his diploma, or even six months later at the current lease price. All he had to do was to pay \$200 down and then \$50 a month for sixteen months. The neurocalometer is simply one of those sensitive little electrothermal devices called thermopiles which produce a weak electrical current with any change of temperature. B. J. says it shows such a change when the nerve coming out of the hole in the spinal column is being pressed upon. But apparently he hasn't been able to convince all the rest of the chiropractors that the device is a scientific one. Here and there previous gradu-

FADS AND QUACKERY IN HEALING

ates of the Palmer School, as well as chiropractors of other educational ancestry, have begun to object to its intrusion into the field. Here are the resolutions adopted by the Hoosier Chiropractors' Association, printed in its Central States Bulletin:

Whereas, apparently in order to intimidate chiropractors, to hold a monopoly upon the chiropractic profession, and to increase his own personal fortune by perhaps two millions of dollars, B. J. Palmer has and is attempting to force the lease of an instrument called the neurocalometer upon chiropractors who in turn are required to extort from their patients an exorbitant fee for its use;

Whereas, the neurocalometer has been carefully examined and tested by members of this Association, and found to be merely an instrument to be used to enable the user to increase his charges, which increase in his income has been boasted about by many of the users;

Whereas, by these tests which were made without prejudice or favor, it has been found that said instrument cannot in any way be relied upon, neither does it add in the least in rendering more efficient chiropractic service, nor can any advantage to the patient be accomplished by its use;

Whereas, the statements of B. J. Palmer since the introduction of said instrument have been damaging and apparently made with malice aforethought;

Therefore be it resolved, that we, the members of the H. C. A. do hereby condemn the use of the neurocalometer;

Be it further resolved, that we go on record as warning all chiropractic patients of the inefficiency of the neurocalometer and against the compulsory exploitation of prices by those chiropractors employing the use of said instrument;

Be it further resolved, that one copy of the resolution be sent to B. J. Palmer and that we hereby authorize the publication of this resolution when deemed proper by chiropractors.

And the editor of the publication continues:

The issue is clear cut. Palmer has made the division, it is Palmer and one thousand chiropractors against the field. Every chiropractor must take his stand and choose his side.

CHIROPRACTIC

It might further be added that not all of the thousand will remain put to the neurocalometer idea. Already reports are current that suits have been filed for the return of the money paid on the lease; reports that chiropractors are returning the machines because they will not do what is claimed. . . . Had only a few purchased the leases, B. J. would have had little ammunition and chiropractic would have been little harmed from his ruthless onslaughts. Every time he fails to sell a lease it means about \$2,006 less for him to use in his national advertising by way of radio, magazines, etc. A day of adjustment in the future is certain.

CHIROPRACTIC STATISTICS

According to an investigation recently made by Dr. Louis S. Reed, chiropractic with its 16,000 practitioners is the largest medical sect now existing in this country. Of course, no one knows exactly how many chiropractors there are, but the figure is quite certainly between 15,000 and 17,000. According to recent studies, California, stamping ground of most medical cultism, has some 2,400 chiropractors. New York 1,475, and Missouri 900. Other states in which the chiropractors are prominent are Wyoming, Colorado, Kansas, Oregon, and Iowa. Wyoming, which has just a few doctors, has one chiropractor for every two physicians, and Oregon one for every three. It has been argued that chiropractors replace physicians and take care of the shortage that exists in the small towns. Actually, the chiropractors tend to concentrate in the cities, 39 per cent of them being in cities of over 200,000, as contrasted with 26 per cent of physicians.

As has previously been told, chiropractic grew rapidly up to 1923. Then it entered a decline which seems to have persisted since that time. A report of a convention of chiropractors held in New York in 1930 indicated acceptance by Mabel Palmer herself, and by many other leaders, of the idea that chiropractic was on the road to ruin. According to Dr. Reed, there are today some 21 active schools with a probable total attendance of 1,400 students. Within the last three years chiropractors are no longer dominated by the

Palmerites. Moreover, just as the osteopaths have gradually spread into physical therapy, so also the chiropractors, once in the field of healing, undertake to advise concerning diet, massage, physical therapy, colonic irrigations, and similar procedures. From the main cult have come offshoots which are concerned more with the ligaments than with the bones; others which mix hot air treatment with adjustments.

As may well be imagined, most chiropractic colleges are conducted for profit or as adjuncts to a practice. The great fountainhead in Davenport is declining. Instead of 2,000 to 3,000 students, as in its heyday, it now boasts only a few hundred. Much of the success in its early days depended on the business methods. These included the meal ticket system of practice, the nonreturnable kimono, and the higher degree.

By the meal ticket system, the patient is told when he first enters that he will require twenty adjustments, and he is sold a ticket, paid for in advance, containing twenty numbers. Each time he comes a punch is taken in the ticket as well as in the patient. It is not recorded that any patient recovers until he has completely exhausted the punches in his ticket. Though the chiropractor insists that he pushes back the vertebra he is unable to offer any explanation as to why it does not stay back.

Most of the patients of chiropractors are women. An old farmer down in Kansas said that he had noticed that whenever a man came to a chiropractor, the bone in his spine that was out of place was usually near the head. The idea offers intriguing possibilities for continued thought. Women have, unfortunately, been much more the victims of charlatans than have men. When the lady comes she is told to bring with her a kimono, which she wears when reclining on the table. Each time she leaves, the kimono is placed in a steel locker. Should she decide, between treatments, not to continue, she must always come back for the kimono. It is an old rule in charlatanism that the difficult step is to get the patient into the office. Once inside, he can be sold again.

Although most chiropractors are just ordinary "D. C's.,"

a few of the anointed boast other appendages. Some are not only Doctors of Chiropractic, but Masters of Chiropractic, Chiropractic Instructors, and Chiropractic Philosophers. In the catalogues of the college it was the custom to publish the diplomas granting these degrees. It is significant that the name sometimes appears twice on the diploma—once where it is granted, and once where the recipient signs it as grantee.

A visit to the Palmer School made by a representative of the American Medical Association revealed an extraordinary assemblage of buildings typical of quackery. First comes the home of B. J.; then the famous Garden of St. Peter resembling, superficially, John Graham's Temple of Health. St. Peter is the custodian. On payment of ten cents one enters the garden and is permitted to see the stuffed snakes and animals, the fountains and the statues. Then one proceeds to the famous Museum of Spines. Here, it is reported, there are assembled the spines of every species that boasts a vertebral column and, most interesting of all, the spine of the boa constrictor, some 25 feet long and containing 400 vertebrae. Consider what happens to the vertebrae of the boa constrictor when it is wrapping itself around a tree. Consider the tremendous number of subluxations in its boa constrictor spine! What anguish to its serpent heart!

Next to the Spinal Museum is the Library. The investigator found, on visiting this Library, that it was locked, and the key was located by the janitor only with difficulty. When he finally did get in, he discovered less than a five-foot shelf of old medical books and three periodicals, the *Ladies Home Journal*, *True Detective Stories*, and some similar publication. What a farce such a collection when contrasted with the marvelous libraries associated with modern medical schools! As Dr. Louis Reed emphasizes, without exception, all chiropractic schools are business institutions run for the profit of their owners.

Ten per cent of the revenues of the Palmer school was formerly devoted to a fund for securing chiropractic legislation in various states. Through their national organization, the chiropractors endeavor to promote chiropractic to the

public, they broadcast on the radio, they defend members arrested for practicing without a license, and they conduct exhibits of the spines of beautiful girls who enter chiropractic exhibition, or should it be exhibitionistic, contests. In state after state chiropractors are practicing without having fulfilled legal requirements. Time and again they are arrested, but the lack of funds for prosecution on the part of State officials has made such arrests well nigh futile. The chiropractor is not, in any sense of the word, a scientist. He is a dangerous charlatan opposing scientific medicine and endeavoring to enter from the basement the practice of healing. Just what the ultimate outcome of the chiropractic cult will be no one knows. It is reported that B. J. Palmer has on several occasions considered a possible fusion of this cult with some evangelistic doctrine. All of our states exempt religious healers.

It has been said that osteopathy is essentially a method of entering the practice of medicine by the back door. Chiropractic, by contrast, is an attempt to arrive through the cellar. The man who applies at the back door at least makes himself presentable. The one who comes through the cellar is besmirched with dust and grime; he carries a crowbar and he may wear a mask!

NATUROPATHY AND ITS PROFESSORS

"After his decease, and a severe casualty deemed fatal by skilful physicians, we discovered that the Principle of all healing and the law that governs it is God, a divine Principle, and a spiritual not material law, and regained health."—Mary Morse Baker Glover Patterson Eddy.

OF all the nations of the world, the United States is most afflicted by its healers. Besides those holding the degree M. D., signifying doctor of medicine and, nowadays, some seven years of study following high school graduation, a host of queer practitioners pervade the medical field. They have conferred on themselves strange combinations of letters, indicating the peculiar systems of healing which a somewhat lax system of legislation and law enforcement permits them to practice on an unwary public.

Cult follows cult, and quackery succeeds quackery, frequently with amazing rapidity. Moreover, many cults seem to be definitely confined to small districts and fail to come to light in the available literature on the subject, or even in a careful investigation. Then, too, a single temporarily successful cult like chiropractic—itself the child of osteopathy and magnetic healing—gives birth to many offshoots which again propagate more bizarre offspring and unusual hybrids. A complete picture of the farcical scene would require endless research. The United States unquestionably bears the palm in every class so far as healing cults are concerned.

The scientific medicine of today is based on the discoveries made in the fundamental sciences. It holds to no single theory as to the causation of disease and it does not insist

correspondingly that the successful treatment of disease depends on the use of any single method of manipulation or administration. The cults may be classified easily into mental healing cults, mechanical cults, electric cults, nature cults and similar divisions, since they adhere definitely to such single devices. Other cults may be classed merely as nonmedical, since they deprecate the use of medicaments. They are founded, moreover, on peculiar fallacies with relation to the anatomy of the body, on misconceptions of certain physiologic functions, or on exaggerations of the relative importance of certain parts of the body in maintaining it in a constant state of health; these cults avoid the fundamental sciences as far as possible. Rather than attempt to correlate the fallacies on which the cults are based with established knowledge, cultist leaders are inclined to deny flatly the facts that have been demonstrated. Of germs and their causation of disease, they take little cognizance, referring constantly to the "germ theory." Many cultist leaders denounce the eating of meat because of some weird notions of body chemistry. Others employ apparatus of such intricacies as would bring a flush of envy to the cheek of Rube Goldberg; mechanically such machinery excites the ridicule of the humblest tyro in the science of physics. The complacency with which cultist leaders dispose of the fundamental facts of science in promoting their views may be taken as sound evidence of their essential eccentricities.

THE ORGANIZATION OF NATUROPATHY

In one of the suburbs west of Chicago was a sanatorium conducted by a son of a naturopath, one Dr. Henry Lindlahr, who was a graduate of a low-grade medical college in Illinois called the National Medical University; that also has passed into the beyond. Chief in this college (?) was old Dr. L. D. Rogers, once secretary of the National Association of Panpathic Physicians, an attempt to organize all of the comical cultists into a single group.

The evidence available indicates that Henry Lindlahr fell early in life for the strange notions of health and disease

exploited by Bernarr Macfadden in the moron's bible, *Physical Culture*, and also for the schemes of Benedict Lust, founder, as he claims, of the main school of naturopathy in this country. Of him, more later! As in every other naturopathic institution, the methods of diagnosis used in the Lindlahr institution were preposterous, the methods of treatment varied and ridiculous. The slogan of the institution was that rallying call of all the peculiar cultists—"no surgery, no drugs, no serums." The methods of treatment used include strange diets, air baths, water cures, light treatments, chiropractic, osteopathy, homeopathy, herbals, psychoanalysis, and any other monkey business that any strange healer might bring temporarily in the limelight. For instance, schools of naturopathy teach, among other courses, sysmotherapy, glucokinesis, zone therapy, physicultopathy, astrological diagnosis, practical sphincterology, phrenological physiology, spectrochrome therapy, iridiagnosis, tension therapy, and naprapathy.

THE DEATH OF EUGENE DEBS

When Eugene Debs, eminent leader of the Socialist party, left Atlanta Prison, he was sent by a woman practitioner of the Abrams electronic methods in Terre Haute, Indiana, to the Lindlahr institution. One night I went to see him with Sinclair Lewis and Paul De Kruif. Lewis was interested in Debs as material for a novel on labor. The ride was an event, but the details are of little interest for the present story. As a physician I was much surprised at that time to find a patient in a sanatorium coming down to see guests on his own responsibility just before midnight. We sat on the porch of the institution talking until the early morning hours. I explained to Mr. Debs casually the nature of the institution to which he had committed his health. I remember that Lewis pleaded with him to get some modern medical attention. I did not see Debs again, however, until the night before his death. The freethinker in politics is likely to fall for freethinking science just as he falls for political panaceas.

One evening in 1926 I received a telephone call from the Lindlahr Sanatorium. The person who called said that Mr. Debs was dying and that his brother wished to have me secure for him the advice of some medical specialist. Mr. Debs, it appears, had told his brother that he wanted me to be notified in case he was ever in a serious condition. To the person who called I said that a competent medical man would ask first to have the patient removed to a reliable hospital. The patient was in this instance too far on the last trail to permit removal. Mr. Debs, it seems, had gone to visit Carl Sandburg who lives in Elmhurst near the sanatorium. While returning, the great socialist had lapsed into unconsciousness. For two days he had been treated in the institution, then his condition being apparently fatal, his brother had been sent for.

In view of the circumstances I consented to ask two well-known medical specialists in Chicago to make the trip, and I went with them to see Mr. Debs. What was the procedure followed in the naturopathic institution when its chiropractic director and its medical consultants, such as they were, were confronted with a serious situation? Mr. Debs, when we saw him, was clearly the victim of malnutrition. He had been treated with the strange diets and the starvation treatment recently so strenuously supported by Bernarr Macfadden in his periodicals. The noted speaker for socialism lay in bed barely breathing. His heart was in a state of fibrillation—a mere twitching of the fibers rather than the sustained beat characteristic of an active heart. The pupil of one eye was dilated and the other contracted. The record sheet of the institution made no note of this observation, which would have indicated to any competent diagnostician a probable disturbance in the condition of the brain. Confronted with this situation, the healers of the naturopathic sanatorium had attempted to overcome the congestion in the lung due to impeded circulation of the blood by applying diathermy or electrical heat. Perhaps because of the unconsciousness of the patient, he had suffered burns which were visible on the skin at the points of application of the elec-

NATUROPATHY AND ITS PROFESSORS

trodes. Apparently he had not been turned in bed as a competent physician would always turn such a patient to prevent congestion from settling of fluids in the lung. The tissues were practically dehydrated. Water had not been put into the body, as it must be put into the tissues of every unconscious person if life is to be saved. An unconscious man does not voluntarily ask for a drink.

Disturbed by the failing heart, the practitioners, whose slogan was "no surgery, no drugs, no serums," endeavored first to support the heart by giving a prescription which was listed on the history chart merely as "eclectic remedies." An inquiry revealed the fact that cactus, an old eclectic remedy, had been prescribed—a plant preparation which was once seriously tested by the American Medical Association. During the tests it was found that cactus solution put into the tissues of a dog would not produce a symptom. Then when the eclectic remedies failed, an attempt was made to give digitalis. This sovereign drug in diseases of the heart almost always produces results when properly administered. The tincture had been given in small doses; a few drops placed upon the tongue. Finally when this remedy failed also in stimulating and controlling the heart an attempt was made to inject a preparation of digitalis into the muscles. Obviously, since the practitioners were unaccustomed to the use of drugs, they hardly knew how to avail themselves of potent remedies when they found them necessary. The incident is typical of naturopathic treatment.

THE BASES OF NATUROPATHY

A naturopath ought to be, as his name implies, a healer who depends on natural methods of cure. However, while walking barefoot in the dew, exposing one's self in the garb of nature to the rays of sunlight, the eating of hay, grain, and oats, and similar technics may constitute a part of every course of naturopathy, the cult has gradually embraced every strange system of healing that has come across the American horizon in the past twenty-five years.

The chief exponent of naturopathy is one Benedict Lust

of the American School of Naturopathy in New York City. Following the name of this philosopher appear usually N.D., D.O., D.C., and M.D. The N.D. signifies doctor of naturopathy; the next two degrees cover osteopathy and chiropractic; the M.D. claimed is from some homeopathic and eclectic medical college, although on the witness stand Lust was apparently unable to prove graduation. Lust claims osteopathic licensure in New Jersey, but there is no evidence that he has ever been licensed for anything in New York. On the other hand, he has been convicted of practicing without a license and fined \$100 in that state. In his Naturopathy School and Health Home he offers, as do all other naturopaths, the whole category of peculiar technics. Benedict Lust used to be found constantly among the advertisers in Macfadden publications. There he promoted from time to time his scheme for blood washing. The technic of blood washing can be had also by correspondence for \$100. It is taught, furthermore, in several resorts operated by this minor prophet of healing in Florida and in New Jersey.

From the first, naturopathy has been developed as an effort to give chiropractic something more to sell than adjustments of the spine. Several chiropractic schools teach naturopathy. Probably 50 per cent of naturopaths have come from the ranks of chiropractic, and any chiropractor can become a naturopath by taking a three months' post-graduate course in a naturopathic school. To dignify these institutions with the title of schools is exalting them far beyond their merits. The average course runs through 24 or 36 months with a short school day. Students come and go as they please. One school has twenty different names for its courses and offers a liberal reduction to a student taking four courses at the same time. One school counts attendance in each class twice —once for naturopathy and once for chiropractic. Another school gives each student two diplomas, each diploma bearing a different name for the school. These systems are planned primarily to meet special requirements in various state laws. Our laws regulating the practice of healing are the joke of the universe. Of course no school of naturopathy

is associated with a regularly established hospital. The students learn what they can, when they can, on whom they can.

Recently the Department of Medical Education of the American Medical Association undertook a special investigation of naturopathic schools. The shrine was visited on November 7, 1927, when it was situated in an old apartment house on E. 35th Street in New York. There it used two floors and a portion of a third. The equipment included an osteopathic table, five chiropractic adjusting tables, a chemical laboratory with one table big enough for two students, two old cupboards, some glassware, and some Bunsen burners. Twenty students were in the college, and fifteen were graduated in 1926. The school meets only at night and the students pay two hundred and fifty dollars annually. In Philadelphia the naturopathic college and hospital is housed in an old apartment building, the hospital thus far existing only as a dream. Nevertheless the college issues an eight-page announcement which not only gives a picture of the hospital with a complete list of its staff, but also announces the appointment of six of the graduates as assistant physicians to the hospital. Although the school claimed ninety students, about forty were actually found somewhere around the institution. Most of the courses are given at night.

In Newark, New Jersey, a two-story dwelling house, the First National University of Naturopathy, is operated by one F. W. Collins, N.D., A.M., and his assistant John Parsons Fields, who it seems is D.C., Ph.C., N.D., D.C., D.Ph., and M.D. In the same institution are also the Collins and Hill Realty Co. and the Standard Products Corporation, which manufactures a water softener and cleanser. This school gives each graduate two or three diplomas and charges him six hundred dollars tuition. Actually the school advertises some twenty bizarre courses, representing twenty different colleges. The one classroom of which the twenty institutions can boast, included when seen thirty chairs, a blackboard, a table, and a piano.

The most recent scheme of *geheimrat* Collins is the American Academy of Medicine and Surgery, incorporated in New

Jersey not for pecuniary profit and registered with the Recorder of Deeds of the District of Columbia, under Congressional Act. An admission fee of \$25 charged at first was raised later to \$50. A certificate in the form of a diploma, granting the degree of a Doctor of Medicine and Master Diagnostician is given to those who attain a total average of 75 per cent or over in the examination required by the Academy. This diploma or certificate, be it understood, does not permit or give anyone the right to practice Medicine and Surgery. Each member was requested to send in at least once yearly a report of his investigations, relative to the application of surgery, drugs, serums, vaccines, electrical and drugless treatments, and mental therapeutics.

The Academy, President Collins now announces, which has been attacked from many sides, and has been inspected through the Federal Department, Department of Justice, Attorney General's Office, and Post Office Department, is still in good standing.

Any graduate physician or surgeon, medical or drugless, who desires to become a member of the Academy must furnish at the time of application a photograph of himself and photostatic copy of his diploma or diplomas. He must answer 99 questions and, upon receiving a total average of 75 per cent or over, he is granted the diploma of the American Academy of Medicine and Surgery, signifying that he passed a successful examination and conferring upon him the degree of Doctor of Medicine and Master Diagnostician. In case of failure in the examination his admission fee into the Academy is refunded. So far no list of diplomates or failures has been reported.

The investigation recently completed revealed ten naturopathic schools actively engaged in turning out peculiar healers for those who like their medicine fantastic. Pennsylvania has four of the schools and New York, New Jersey, Minnesota, Maine, Florida, and California provide one each of the remainder.

Among the strange devices promoted through schools of naturopathy are biodynamochromatic diagnosis, in which

the patient sits facing east or west while his abdomen is thumped, and colored lights are thrown upon it; iridiagnosis, which claims ability to diagnose disease through the color of the iris of the eye; spectrochrome therapy, in which the patient is advised to wear clothing and garments according to the colors of the spectrum; and, in many schools, zonotherapy. In this technic the body is divided into zones lengthwise and crosswise, disease in one zone being cured by the application of little wire springs around the fingers and toes controlling other zones.

Benedict Lust's own definition of naturopathy includes the "art of natural healing and of the science of physical and mental regeneration on the basis of self-reform, natural life, clean and normal diet, hydrotherapy (Priessnitz, Kneipp, Lehmann, and Just system), osteopathy, chiropractic, naturopathy, electrotherapy (sunlight and air cult), diet, phytotherapy, physical and mental culture to the exclusion of poisonous drugs and non-adjustable surgery."

Out of the schools of naturopathy and our exceedingly lackadaisical laws controlling the practice of healing have come opportunities for other inspired prophets to develop still more bizarre institutions in medical instruction.

The American College of Sagliftology, located in San Diego, California, is controlled by one P. Hollow Poole and his wife. Poole assumed the title of doctor and was promptly indicted for misuse of that title. His technic is primarily a part of the uplift movement. Mr. Poole is convinced that health depends on keeping everything in the interior uplifted. He therefore sells corsets, belts, rubber stockings, and other devices planned toward this end. In his college anatomy, contourology and mensuration constitute courses running from six to twelve months. A graduate is called a sagliftologist.

In St. Louis Dr. William H. Woodfin, A.M., Ph.D., D.D., first a Methodist and then a Congregational minister, has a college of divine metaphysics. There he offers courses in the psychology of business success, metaphysical interpretation of the Bible, Biblical literature, comparative religions, and

the master mind system. Dr. Woodfin confers the degrees of Doctor of Psychology, Doctor of Metaphysics, and Doctor of Divinity for from \$20 to \$100. He must be busy, since he has about twenty stenographers constantly employed. He not only trains healers but himself treats the sick.

In Seattle, Washington, in 1919 the Universal Sanipractic College was organized. The word "sanipractic" was defined as the "practice of health" with the keyword "elimination." The devotees were concerned with all methods of treatment except drugs and major surgery, but permitted the administration of herbs and teas. The Washington state law permits sanipractors to try everything except the administration of drugs. The students were therefore primarily chiropractors who wanted unlimited rights to practice. This institution represents merely another attempt to find a short route into the practice of healing for those who want to enter by the back door.

Naturopathy and the allied cults represent capitalization for purposes of financial gain of the old advice that outdoor life, good diet, enough exercise, and rest are conducive to health and longevity. When these simple principles can be linked with the printing of worthless pamphlets, intricate apparatus, or faith cures, the formulas yield gold. By these systems, misinformation in the field of science is spread widely among what is probably one of the most ignorant people in the world relative to the organization of their own bodies and their care. The slogan, "no bugs, no drugs, no surgery," is used to catch the unwary. The appeal is one likely to attract particularly the laborite, the radical, and the freethinker. The writings of Upton Sinclair on these subjects mislead thousands. The example of Eugene Debs must have misled hundreds of others. In time of stress when pain becomes impossible to bear even by the self-hypnosis of Christian Science, the nature cure healer himself or the fanatical exponent of faith healing reaches eagerly for the hypnotic tablet of a barbituric acid derivative, the soothing needle of the narcotic, or the blissful unconsciousness of anesthesia. Then when the heart is no longer able to urge

NATUROPATHY AND ITS PROFESSORS

the tired circulation and begins feebly to discontinue its automatic functions, the physician is called in; shaking his head mournfully he provides enough digitalis to slow the beat and make it more forceful. To this state of affairs one may apply the reverse of the slogan of a famous rat-paste: "They don't die in the house." As the spectre of dissolution peeps over the foot of the bed the naturopathist, chiropractor, manipulator and faith healer depart. The physician enters, fountain pen in hand, ready to sign the death certificate.

The practitioners of naturopathy, according to Dr. Louis S. Reed's late report to the Committee on the Costs of Medical Care, number some 1,500. Whereas most cults embrace a single conception as to the cause and healing of disease, naturopathy embraces everything in nature. Benedict Lust, N.D., D.O., D.C., M.D., already mentioned, presents the following definition:

. . . a distinct school of healing, employing the beneficent agency of Nature's forces, or water, air, sunlight, earthpower, electricity, magnetism, exercise, rest, proper diet, various kinds of mechanical treatment, mental and moral science. As none of these agents of rejuvenation can cure every disease (alone) the Naturopath rightly employs the combination that is best adapted to each individual case. The result of such ministrations is wholly beneficent. The prophylactic power of Nature's finer forces, mechanical and occult, removes foreign or poisonous matter from the system, restores nerve and blood vitality, invigorates organs and tissues, and regenerates the entire organism.

The real naturopaths were, of course, such healers as Father Kneipp, Priessnitz, and others who advocated natural living and healed by the use of sunlight, baths, fresh air, and cold water, but there is little money to be made by these methods. Hence the modern naturopath embraces every form of healing that offers opportunity for exploitation. Thus, there have grown from naturopathy a myriad peculiar doctrines which run the gamut from aeropathy to zonotherapy.

The schools of therapy having any status whatever are three in number, one in Philadelphia, one in New York, and one in Florida. In these schools the strange notions that have been mentioned are taught to candidates who may not be able even to read or write, because preliminary requirements in such schools are given little if any consideration. Although a high-school education may be mentioned as a necessity, its equivalent may be substituted and the equivalent, in the judgment of the admitting officers, would give pause even to such a mathematical genius as Einstein. The professors themselves are without baccalaureate degrees or, in most instances, any other degree of importance; and the students are not even the equivalent of the professors.

A few of our states provide for licensing naturopaths but most states include them with the drugless or limited practitioners. Once admitted to the practice of healing, these cultists begin at once to practice unlimited medicine. Since the weapons of medicine against disease are potent for harm as well as good, such practitioners are a menace to the public health and a drain on the public purse. A description of a few of the extraordinary doctrines follows:

A

Aerotherapy. Among the hundred or more types of healing offered to the sophisticated is aerotherapy. Obviously, aerotherapy means treatment by air, but in this instance hot air is particularly concerned. The patient is baked in a hot oven. Heat relieves pain and produces an increased flow of blood to the part heated. The blood aids in removing waste products and brings to the part the substances that overcome infection. There is nothing essentially wrong about hot air therapy.

Since the time of Hippocrates and indeed even in Biblical legend men have availed themselves of the healing powers existing in nature. The light and heat of the sun, the burning steam from natural hot springs, the dry air of the desert, and even the buffeting of the waves of the sea have been used for physical stimulation in overcoming disease. It has re-

mained for the astute commercial minds of our progressive land to incorporate these qualities for their personal gain.

Aerotherapy as one department of physical therapy becomes a cult when it is used to the exclusion of all other forms of healing. In New York a progressive quack established an institute equipped with special devices for pouring hot air over various portions of the body. He issued a beautiful brochure, illustrated with the likenesses of beautiful damsels in various states of negligee, smiling the smile of the satisfied, under his salubrious ministrations. In this document appeared incidentally the claim that hot air will cure anything from ague to zoster. The same claim has been made by the faith healers and the apostles of manipulation. But the first call it Christian Science and the second call it chiropractic.

Alereos System. Here is a system of drugless healing which "recognized the human body as a wonderful and perfect machine, which, properly adjusted and taken care of, will run without friction." It emanates from Brooklyn. "The Alereos system," says the folder, "in relation to the human machine, occupies the place of the skilled mechanic to the disabled engine. It searches for the causes of the trouble and seeks to remove them by its tools. These are the hands, aided by several mechanical appliances and vibrations." The home office supplies heat and mechanical vibration with "several specially constructed apparatus (*sic*)."¹ Not content to sell its simple hot air and vibration treatments on their merits, the Alereos system plays strongly on the osteopathic and chiropractic claims of contractions and pinched nerves, and condemns all drug treatment as poisoning. It is the acme of exploitation of the sweat bath and massage. One takes ten treatments for twenty-five dollars *in advance*; obviously, the cost is little, provided one is not fooled into neglecting tuberculosis or ulcer of the stomach, which are among the conditions mentioned in the Alereos folder.

Astral Healing. Casanova, international lover and charlatan, tells at great length of his delving into magic, of the drawing of horoscopes, and of astrology. The mystery of the

stars has always had fascination for the multitude and it would have been strange, indeed, if some astute healer had failed to take advantage of this folly in the founding of a cult. The Astral healers advertise in foreign language newspapers. They read the diagnosis from the horoscope and then make an additional charge for giving the advice indicated by their readings.

Autohemic Therapy. For many years one L. D. Rogers was the head and chief owner of the National Medical University of Chicago. The school was a low-grade institution, virtually a diploma mill. Rogers is a promoter of medical schemes and fancies. Like many other cultist leaders he is constantly founding societies of which he is the chief panjandrum. Once he was the permanent secretary of the National Association of Panpathic Physicians, apparently an attempt to organize all the comical cultists into a single group. However, the society had only a brief existence, and the permanent secretary was quite temporary. Then he began to exploit a cancer serum and organized the American Cancer Research Society, L. D. Rogers, president. Finally, he got the notion called "autohemic therapy." "It consists," he says, "in giving the patient a solution made by attenuating, hemolizing, incubating and potentizing a few drops of his or her own blood, and administering it according to a refined technic developed by the author." Playing the game to the limit, Rogers also advertises a one-hundred-dollar mail order course for other physicians. He wrote a book called *Autohemic Therapy* and organized the Autohemic Practitioners. Newspaper publicity in the form of full-page advertisements and clever press agentry fetch the come-ons for the course. The appeal is made cleverly to the anti-medical cultists of all varieties by the slogan "without use of bugs or drugs." A clever and shrewd old fakir is L. D. Rogers! There is not an iota of scientific evidence that his method or his system ever cured anybody of anything.

Autology. E. R. Moras, M.D., founder of autology, finally arrived in the "booby-hatch." Before that, however, he had achieved a considerable following through advertising in

the press, and through exploitation along the lines established by Elbert Hubbard. Indeed, Elbert said of autology: "Dr. Moras has written a Commonsense Book on Autology, and by so doing, placed the Standard of the Creed of Health farther to the front than any man who has lived for a thousand years." Ah, well, Elbert was never much given to conservative statements! As might be expected Moras also had the support of *Physical Culture*, Bernarr Macfadden's major opus; of J. H. Tilden of Denver, who has some fads of his own, and even of Luther Burbank.

Autology is a system of stereotyped hygienic and dietetic advice sandwiched in between a lot of pseudoscience and bad counsel. It is essentially another preaching of Ecclesiastes' urge for moderation in all things. Unfortunately it was carried to the point at which Elbert Hubbard said, "Moderation, equality, work, and love—you need no other physician." Moras exploited his book at anywhere from \$10 to \$2, and on the side sold some patent medicines. Finally, his eccentricity went beyond the bounds of legal sufferance. He was arrested for insulting a woman on a train; he attempted to blackmail Leon Mandel out of a million dollars, and appealed to the President of the United States to help him collect \$50,000 from Parke-Davis and Company. So his friends put him in a sanatorium!

Auto-Science. An Auto-Science Institute is conducted in San Francisco, devoted, it appears, to practical psychology, scientific serums, and suggestive therapeutics. The watchword is "Law of Creative Energy." Regular lessons can be had for four weeks on trial, but the diploma, the degree, and the "Auto-Science" textbook cost \$35, which is a special reduction from the sum of \$50, the regular fee for the course. The high priest, Dr. E. C. Feyrer, presents testimonials of grateful imbeciles who have been cured of all sorts of things. It appears that not only can you heal yourself, but you can help others by mental broadcasting. Is there no protection against this sort of thing? Must one be healed even when he enjoys ill health?

Autotherapy. This pleasant little idea grew in the mind of

a homeopath, presumably obsessed with the homeopathic slogan "*similia similibus curantur*," or "like cures like." Dr. Charles H. Duncan of New York was able to have his views promulgated through some of the good medical journals and their strangeness secured him unusually great newspaper recognition. "Autotherapy," as the name implies, is "self-therapy" or "natural therapy." The word "nature" is a term to conjure with in cultism. Carrying the idea of the "hair of the dog that bit you" to its ultimate interpretation, Duncan recommends the healing of boils by cooking up and swallowing the matter from the boil; for dysentery he filters the excretions and injects the fluid that filters through; for tuberculosis he filters the sputum and injects the filtrate. He claims all sorts of cures. It is the belief of competent authorities that the system has no basis in scientific knowledge and that the results secured, if any, are merely such as follow injections of foreign substances of any kind into the body.

B

Biodynamochromatic Diagnosis and Therapy. Whenever the irregulars in the healing art assemble for the purpose of exchanging trade secrets and telling each other how good they are, George Starr White, M.D., F.S.Sc. (Lond.), D.C., Ph.D., LL.D., Los Angeles, is among those present. He was "second vice president" of the Allied Medical Associations in 1918. He is also opposed to vaccination and helps out the American Medical Liberty League. White was graduated from the New York Homeopathic Medical College when he was forty-two years old. He played with Abrams' spondylotherapy (see later) and also pushed Fitzgerald's "zone therapy" (see later). Then he developed the fancy-name system that combines a lot of hocus-pocus—it seems one diagnoses disease by a "Sympathetic Vagal Reflex." To elicit the said phenomenon, the patient faces east or west and his abdomen is thumped until a dull area is found. Then colored lights are thrown on the abdomen and the thumping is continued. A ruby and blue light with associated dullness means one thing and a green light combina-

tion another. That is to say, Dr. White says so; really, it doesn't mean anything. Once Dr. White took a flier in the patent medicine business. The F.S.Sc. (Lond.), with which he is endowed, means "Fellow of the Incorporated Society of Science, Letters, and Arts of London, Ltd." Lots of people who play the same game as White have the same letters. The cost of the elegant diploma is about \$5. Sometimes White also puts after his name D.C., Ph.D., LL.D. No one knows where he got those. The method was given a beautiful send-off in Mr. Macfadden's *Physical Culture* magazine by Dr. Edwin F. Bowers in February, 1918. Dr. Bowers is not a doctor of medicine, and the only M.D. he has is the one Macfadden gives him. Strange how the same names recur again and again in these stories of the ghoullike activities of the harpies who live by exploiting the sick!

In 1925, White produced the last word in this fancy business, the Rithmo-Chrome and Duo-Colors. He has a lot of books to sell and a lot of apparatus. For instance, in his latest announcement, Figure 10 shows a "person sitting on a Filteray Cushion and receiving Filtered Ultrared Rays while doing Rithmo-Chrome breathing and inhaling Oxygen-Vapor or Medicated Vapor and at the time getting therapeutic effect of the magnetic forces of the earth, as he is grounded and facing exactly north and south." If the Duo-Colors are added to this, Dr. White affirms, the patient is certainly getting "Natural Methods Condenst." And if he isn't getting that, what is he getting?

Biological Blood-Washing. This utter humbug is accredited to Benedict Lust, of whom more later. He is one of the king pins of the naturopathy cult. Under "naturopathy" his record will be made apparent.

C

Chirothesians. This peculiar group emanates from California, and its fountainhead is the Western College of Drugless Therapeutics. It combines a new religious cult with medical hocus. Many State laws give amnesty to religious healers. The catalogue of the college says: "While working

under this title, healers ordained to work are protected from annoyance by the state medical board." Evidently a chirothesian is not limited to any system. One had his office full of bottles labeled cancer, paralysis, rheumatism, and tumors; another said that he made his diagnoses by examination of the pulse and "irido-diagnosis." (For the latter system, see Under "I.") Chirothesianism is apparently a method of mixing religion and fake healing to get around the medical practice laws.

Christos (blood washers). A half-dozen cults use the term, "blood washing" as a come-on. It usually refers to some method of purging the intestinal tract. The Christos cult consists mostly of Negroes. Herb tonics are dispensed with the claim that they are especially blessed by Christ, the Savior. Taken in the form of tea, these herbs wash the blood of sin and impurities. New York authorities arrested and prosecuted the Negro leaders.

Chromopathy. Naturopathic physicians who practiced White's colored light system on the side used this term to indicate the healing of disease by colored lights.

Chromatherapy. Another modification of White's colored light scheme.

E

Electric Light Diagnosis and Therapy. See Electrotherapy.

Electro-Homeopathy. A combination of electrotherapy and homeopathy. (See under each.)

Electro-Naprapathy. A combination of two cults. (See under each.)

Electrotherapy. The use of electric devices has a definite place in the treatment of disease. It should not be thought, however, that any electrician or machinist is competent to use such methods. Electricity is a two-edged sword; in the hands of the ignorant, it may wreak disaster. Actually its use should be limited to those who have had the training of a physician and then given special study to the use of electric devices or to competent technicians working under the direction of a physician.

G

Geotherapy. New York investigators found a concern treating disease by the application of little pads of earth—hence the grandiloquent title. A warning resulted in the abandonment of the enterprise.

I

Irido-Diagnosis. The poetical notion that the eye is the mirror of the soul evidently convinced a minor medical prophet in Chicago that money might be made by founding a school of medicine in which the diagnosis of all diseases would depend on the ability to notice the changing colors of the iris or colored material of the eye. With a remarkable genius for publicity, he succeeded in attracting much free newspaper mention and in leading to his school numerous ignorant satellites who desired to enter on the practice of healing by some easy route. Among those attracted have been a few regularly licensed physicians who sought to exploit themselves and enhance their incomes by adding the claim of this superior power to such as might already have been conferred upon them by the state. Even today the practitioners of this vagary burst into temporary luminescence in the sensation-seeking press. Fortunately the prophet himself was accused by his wife of mental vagaries. He gradually subsided!

K

Kneipp Cure. See Naturopathy.

L

Limpio Comerology. A Mrs. Caroline M. Olsen and her husband, Emil, hailing from St. Louis, adopted the name of Limpio Comerology for their health service, which appears to have been founded primarily on the doctrine of clean eating. In connection with the teaching of the science, there were dispensed "Q-33" and "Q-34," proprietary preparations, to make the clean eating physically successful. Mrs.

Olsen, obviously Norwegian or Danish, explained that the term "Limpio Comerology" was taken from the Spanish.

M

McLean. James A. M. McLean, born in Martinique, claims that he is a geologist, evolutionist, pathologist, psychologist, anatomist, biologist, chemist, erosionist, and theophonist. Like many other quacks, he turned up in California, claiming in his advertisement the special powers of reducing and building obesity, and reducing various disorders, diseases and infirmities. His system was a combination of physical, metaphysical, and spiritual healing—bunk from start to finish.

N

Naturopathy. This is merely another name for naturopathy. This school was founded by a naturopath of the Benedict Lust school who adopted this fanciful name to show that he knew things that even they didn't know.

P

Pathiatry. This particular cult is trademarked. "It combines the best principles of spinal adjustment, traction, manipulation, deep massage, etc., administered by oneself. So simple and delightful as to become a part of the daily toilet. Done anywhere, at any time, while standing, even sitting; without appliance of any kind."

Poropathy. Arthur de Collard turned up in Richmond, Va., and persuaded the legislature in that State, in 1918, to license him to practice poropathy. Arthur claimed to be a cousin of Napoleon and a graduate of several European universities. His diplomas, he said, had all been burned, and he would not answer the simplest question on the elements of medicine and surgery. The bill defined poropathy and manipulative surgery as a new branch of therapeutics. It employs no medicine taken through the stomach, and does not employ the knife. Healing and curative agencies and lotions, however, applied directly to the diseased organs and

to the nerves controlling those organs, through the pores of the skin and mucous membrane, which are opened by medical manipulation, immediately reach the disease or ailment through the eliminating organs, and by this process heal and cure most of the ills to which flesh is heir, including: internal cancer, cerebrospinal meningitis, epilepsy, tuberculosis of the joints and heart disease. This system, according to the bill, would adjust, heal and cure broken bones, sprains, and dislocations. After a committee substitute for the bill and various amendments to the substitute had been rejected, the bill was passed and Arthur de Collard through it acquired the right to practice poropathy in Virginia. There are now several poropathists in the state who have taken a course under De Collard.

Practo-therapy. This was a group of men and women, mostly nurses, who treated human ills through intestinal irrigation. "Practo-therapy" was evidently a fanciful title in place of the word "procto."

Q

Quartz-therapists. A term used by "Naturopath" irregulars who use quartz mercury vapor lamps.

S

Sanatology. Sanatology is a delightful title conferred on his particular science of healing by Dr. P. L. Clark, Chicago, who insists that he is the first man in the world to make the pronouncement and prove that acidosis and toxicosis are the two basic causes of all disease. In his school on Prairie Avenue in Chicago he teaches people, so he says, how to remove the causes and restore the body to normal. He issues little cards for free consultation and blood-pressure test, which are the "come-ons" by which he secures permanent contributors.

Somopathy. The Illinois College of Somopathy is located at Elgin, Illinois, and its fond father is Dr. C. H. Murray. It appears that this science is devoted to the body suffering. The diagnostician feels around in the place where the nerves

emerge from the spinal cord and adjusts them. Then he continues his good effects by applying ice cold, or material heated up to two hundred degrees at the place of adjustment. Here again is an offshoot of chiropractic and osteopathy, with which it is associated in another school. Dr. Murray promises his graduates \$10,000 a year if they are successful.

Spectrocromists. This was an establishment operated through advising individuals to wear clothing or garments according to the color of the spectrum. How they came to the conclusion as to what part of the spectrum the individual should assume, in selecting his colors, is not clear. Perhaps it was for this advice they charged. They have been arrested and fined.

T

Tropo-therapy. This was a group of food faddists advertising special nutritional foods under this fanciful name.

V

Vita-O-Pathy. The name of this particular system indicates how hopeless is any attempt to simplify the control of quackery. Its prophet, Orrin Robertson, Ph.D., D.M., M.D., announces that:

Vita-O-Pathy is the essence and quintessence of the following thirty-six systems with additional discoveries and inventions; yet it is unlike any of them. Consequently it Restores Health to Humanity without a Surgical Operation. It is based on Geometry, a true science which contains the fundamental secrets of Ancient Science, Philosophy and Religion.

- | | |
|-----------------------------|------------------------|
| 1. <i>Prana-Yama</i> | 10. <i>Botanic</i> |
| 2. <i>Zoism</i> | 11. <i>Allopathy</i> |
| 3. <i>Spiritual Science</i> | 12. <i>Biopneuma</i> |
| 4. <i>Psychic Sarcology</i> | 13. <i>Prayer Cure</i> |
| 5. <i>Somnopathy</i> | 14. <i>Rest Cure</i> |
| 6. <i>Christian Science</i> | 15. <i>Diet Cure</i> |
| 7. <i>Osteopathy</i> | 16. <i>Eclecticism</i> |
| 8. <i>Chiropathy</i> | 17. <i>Hydropathy</i> |
| 9. <i>Divine Science</i> | 18. <i>Magnetism</i> |

- | | |
|-----------------------------------|------------------------------------|
| 19. <i>Phrenopathy</i> | 28. <i>Biochemic System</i> |
| 20. <i>Nervauric Therapeutics</i> | 29. <i>Therapeutic Sarcognomy</i> |
| 21. <i>Electro-Therapeutics</i> | 30. <i>Physio Medical</i> |
| 22. <i>Chromopathy</i> | 31. <i>Mechanical Therapy</i> |
| 23. <i>Vitapathy</i> | 32. <i>Suggestive Therapeutics</i> |
| 24. <i>Homeopathy</i> | 33. <i>Auto-Suggestion</i> |
| 25. <i>Psychopathy</i> | 34. <i>Tripsis</i> |
| 26. <i>Magnetic Massage</i> | 35. <i>Spondylotherapy</i> |
| 27. <i>Faith Cure</i> | 36. <i>Chirothesia</i> |

He has worked out a scheme of muddling the moronic mind, and there are apparently enough persons of an intelligence below that of a child of eight to provide him with plenty of victims. His price varies from \$40 a week to whatever he can get. It appears that he was born on May 28, 1858, in Cass County, Missouri, under the control of the Archangel Haniel, who it seems controls Friday, and whose chief characteristic is spiritual love. Further than this the deponent saith not.

Z

Zodiac Therapy. This group was an offspring, formerly employed in an establishment called "Aero-therapy-Astral Healers." On the walls of the establishment, on blue paper, were photographic enlargements of signs of the Zodiac. The ceiling was painted to look like the heavens. Persons desiring their horoscope read, the effect of the horoscope on their health was determined, for which a charge was made. Pamphlets were sold, also herb remedies.

Zonotherapy. One Dr. Fitzgerald of Hartford, Connecticut, has divided the body into zones, lengthwise and cross-wise, and heals disease in one zone by pressing on others. To keep the pressure going he developed little wire springs. For instance, a toothache on the right side may be "cured" by fastening a little spring around the second toe of the left foot. Naturally, Fitzgerald has never convinced any one with ordinary reasoning powers that there is anything in his system—except what he gets out of it.

THE QUACKERY OF ALBERT ABRAMS

"A false tendency," replied Goethe, "is not productive; or if it is, what it produces is of no worth. It is not so difficult to perceive this in others; but with respect to oneself the case is different, and great freedom of mind is required. And even knowledge of the truth is not always of use; we delay, doubt, cannot resolve,—just as one finds it difficult to leave a beloved girl of whose infidelity one has long had repeated proofs."—Conversations of Goethe with Eckermann.

ALREADY well sunk in the oblivion that is the terminus of most forms of medical quackery, nevertheless the Abrams box, E.R.A., the electronic reactions of Abrams, or some more recent modification of this bizarre notion are still promoted by a few charlatans. Albert Abrams attracted world-wide notoriety by the unusually picturesque character of his methods. He was born in San Francisco in 1864. According to available records, he attended the University of Heidelberg, Germany, and was graduated in 1882. The story of his career in brief as told by himself in *Who's Who* (for he was early included in that assemblage of the noted and notorious), indicates an average medical existence until 1910. Some ten years after his graduation, he became professor of pathology in the Cooper Medical College in San Francisco, holding the position from 1893 to 1898. His earnestness and intelligence had apparently been recognized by the California State Medical Society, of which he became vice president in 1889; he had been made president of the San Francisco Medico-Chirurgical Society in 1893. Coincident with his recognition as a pathologist, he began to write

profusely not only on scientific topics, but also a sort of medical belles-lettres which were considered clever for their day. They were somewhat satirical in tone and attracted wide attention.

SPONDYLOTHERAPY

In 1909 Abrams published a work called *Spinal Therapeutics*, and in 1910 a volume on *Spondylotherapy*, which two books constituted his first definite departure from medical orthodoxy. The term came from *spondylo*, a Greek word referring to the spine, not the American "spondulix." In creating spondylotherapy, Albert Abrams emphasized the peculiar hypothesis that the reflex centers in the spine could be stimulated by constant, rapid percussion or hammering, and that this could be used for diagnosis and treatment. In reviewing his book, *The Journal of the American Medical Association* called attention casually to the fact that this might be considered an attempt to give the general medical men something akin to osteopathy and chiropractic. At any event, Dr. Abrams soon began to exploit his idea, giving courses on spondylotherapy in various parts of the country at \$50 per course and calling the attention of physicians to his methods by various types of advertising, just within the fold of ethical procedure. In 1922, after Abrams had conceived his remarkable scheme of electronic medicine, spondylotherapy courses of one month each advanced to a fee of \$200 per course. At the time when he first began to promote his conception of spinal percussion, he founded the American Association for the Study of Spondylotherapy, of which he naturally became president and later honorary president.

It is not at all unusual for medical cults to organize themselves promptly for efficient salesmanship and exploitation of their wares. It must be pointed out, however, that this is not the same thing as the organizing of scientists into bodies that meet once each year for the interchange of advance in scientific knowledge.

THE BIRTH OF E.R.A.

Twelve years after he had apparently percussed the back to the fullest extent of what it would yield monetarily, Dr. Albert Abrams turned the patient over and began to thump the abdomen.

For many years the art of percussion has constituted a significant part of the practice of physical diagnosis. Indeed, Auenbrugger, who evolved the science of percussion more than a century ago, had shown physicians that various parts of the body when struck give off a resounding tone or a dull tone, according to the type of tissue that lay underneath. The method had been used to great advantage since that time for the diagnosis of such diseases as pneumonia, tuberculosis, enlargement of the heart, collections of fluid in the lungs or abdomen, and similar conditions. However, Dr. Abrams did not confine himself simply to percussion of the abdomen. That indeed was simply incidental. It added to the psychic suggestion of his machinery a vicarious laying on of hands. He utilized all of the mystery and profound awe that are inherent in electric apparatus, particularly the radio. Instruments were developed beside which a Goldberg cartoon is simple indeed. In the Goldberg cartoon a brick falls on a springboard causing a rock to hit a cat which springs at a canary causing it to flutter its wings. This puts out a candle which has been heating some water in a spoon. The steam condensing drops on the bald head of a sleeping man in a rocking chair. Awakening with a start he begins to rock, thus activating a fan which chases away a fly that has been crawling on the fat man's bald head.

In brief, Abrams secured from a prospective patient a drop of blood upon a piece of filter paper and placed this in an apparatus called a "dynamizer." This dynamizer was in turn connected with a rheostatic dynamizer from which wires passed to a vibratory rheostat, which finally was connected with a measuring rheostat. But in order to introduce a variable factor in the operation of this extraordinary combination of wires, coils, batteries, and what-not, a final wire

passed from the measuring rheostat to the forehead of some healthy individual. The individual stripped himself to the waist and then faced west in a dim light. Notice this added hokum that goes back to the symbolism of Biblical legend! The operator, or Abrams' disciple, as he may better be termed, then percussed or tapped upon the abdomen of this healthy subject. Various areas of dullness naturally were found, and it was the peculiar delusion of Albert Abrams that he could tell whether the person whose blood was being tested was suffering from syphilis, sarcoma, carcinoma or cancer, typhoid fever, malaria, gonorrhea, tuberculosis, or various forms of sepsis by such dull areas. Note that he selected the diseases most feared by mankind. Not only that! He claimed he could determine the very spot within the body of the individual who had supplied the blood at which the disease had its focus. Furthermore, the severity of the condition was measured in ohms of resistance. Still more wonderful, but unfortunately not true, Dr. Abrams claimed that one could substitute the autograph of some dead individual instead of his blood and find out what diseases that individual suffered from. Finally, he asserted that he could determine, according to the amount of dullness and its position, the religion of the person tested. In his periodical, founded especially for disseminating these extraordinary ideas, he classified six types of religion, including Catholic, Methodist, Seventh-Day Adventists, Theosophist, Protestant, and Jews, with the area of dullness for the Methodist in the left lower quarter of the abdomen and that for a Protestant in the right lower quarter, never explaining what peculiar conditions of the appendix in the right lower corner, or the lower large bowel in the lower left quarter might be responsible for the varying dullness in the subject tested. The explanation was never forthcoming as to why the blood of persons of the Jewish faith should produce so much more abdominal dullness in the subject than that of Christians. Had the percussion been made directly on the persons concerned, the frequency of constipation in persons of Jewish origin, who are naturally heavy eaters, might have explained

the matter satisfactorily, but it must be borne in mind that the percussion was invariably made on a healthy subject and that the person concerned supplied only a drop of blood which was placed in the Abrams dynamizer. Once these strange devices were developed, Dr. Abrams made them available to physicians and osteopaths who cared to have them.

A periodical known as *Physical Clinical Medicine* was founded and "devoted to the study of the electronic reactions of Abrams in the diagnosis, treatment, and pathology of disease." It was sold at \$1 per copy or \$2 per year. Here Abrams advertised his courses in spondylotherapy and electronic diagnosis and treatment at \$200 per course in advance, and here also he offered to furnish the four pieces of intricate machinery for a total of \$198 with the significant legend "no apparatus sold on credit—terms cash."

It will be seen that thus far Albert Abrams was concerned only with the diagnosis of disease and that the electronic method had nothing to say about treatment. It is a well-known fact, however, that much more money is to be made from persistent courses of treatment which involve numerous visits to the office of the cultist than from the single visit that produces a diagnosis. It might have been expected, therefore, that the astute Abrams would develop a method of treatment on the basis of his system of diagnosis. The device which he finally issued was known as the oscilloclast. This device was to be had only on lease, however. The lessee had to sign a contract that he would not open the device after it was received. The oscilloclast was sold for a first payment of either \$200 or \$250, according to whether it was wired for alternating or direct current, and the lessee was responsible for monthly payments of \$5 each, covering its term of use. According to the theory of the exploiter of this device, each disease has a vibration rate. When the patient is subjected to treatment with the device the vibration rate is made the same as that of the condition from which he presumably may suffer.

THE QUACKERY OF ALBERT ABRAMS

EXPLOSION OF THE ABRAMS NOTION

In October, 1923, an opportunity occurred in Los Angeles to examine the actual value of the Abrams apparatus through the medium of a justice court case. In connection with this matter, Professor R. A. Millikan, head of the California Institute of Technology, winner of the Nobel Prize in physics and an authority in the realm of physics, examined the Abrams apparatus and its method of use. He stated that he did not consider that this apparatus rested upon any sort of scientific foundation whatever, and, indeed, that the claims set up by Abrams and his followers from the standpoint of physics are the height of absurdity. In a more technical explanation, Professor Millikan pointed out that when making a diagnosis, the Abrams followers insert electric resistance into a circuit which cannot oscillate at all, and therefore has no vibration frequency and that the claim that a diagnosis can be made by turning a dial to different buttons indicates complete ignorance of the fundamental laws of physics. He further pointed out that Abrams' followers claim that they impose on the microorganism of disease its own vibration frequency; yet what they actually do is to impose one and the same vibration frequency for all diseases. "If a microorganism has any natural frequency at all," said Professor Millikan, "it would have to be millions of times higher than any audible frequency of the kind they use in the treatment, so that the claim that they are finding and then imposing upon the disease its own natural frequency is simply the height of ignorance in view of the kind of physical mechanism with which they are dealing." Professor Millikan characterized the device perfectly when he said it was the kind of machine a ten-year-old boy would build to fool an eight-year-old.

At the same time other investigations were made by physicians who did not hesitate to open and analyze the Abrams apparatus. It was found that it constituted a veritable jungle of electric wires—an apparatus violating all the sound rules of electric construction. Indeed, cases are reported of deaths

that occurred to persons subjected to treatment, because the construction of the apparatus was such that the ignorant electronic practitioner so connected the machinery that the full city current passed through the body of the patient.

THE ABRAMS PRACTITIONER

We come then particularly to the type of physician who employs the Abrams apparatus, and who is pleased to call himself an "electronic practitioner." The records of many were in the files of the American Medical Association that are devoted to quacks and quackery. As was pointed out, Abrams organized early the American Association for the Study of Spondylotherapy. Promptly on the launching of so-called electronic medicine he developed the American Electronic Research Association with various state branches. Albert Abrams was first president and then honorary president. Early in the development of his campaign, Abrams determined to admit osteopaths to the exclusive circle of electronic practitioners and to his courses in San Francisco. He knew the value that attaches itself to exclusiveness, and the humble chiropractor was not admitted into the sacred fold. However, certain chiropractors are apparently not averse to employing the Abrams machinery for extracting shekels from the deluded and unwary. Indeed, the report of the annual convention of the American Electronic Research Association brought prominently to the attention of those present the fact that manufacturers of Abrams apparatus were regularly selling such a device to chiropractors. One Dr. Cowan, who it appears represented the American Institute of Rational Therapeutics in Chicago, spoke as follows:

Question: What is the name of the machine?

Mr. Cowan: We have two types of treating machines. One is a unit that treats one person at a time. That is called the electronoclast. We have also a master machine that treats six patients at a time. That is known as the isoclast.

Question: The diagnostic machine?

THE QUACKERY OF ALBERT ABRAMS

Mr. Cowan: That is known as the hemopathometer. Hemo means blood, path means pathology, meter means measure, hemopathometer.

Question: Do you sell to chiropractors?

Mr. Cowan: Do we sell to chiropractors? I answered that by saying that we do just exactly like everyone else on the floor. If a chiropractor is licensed by the State of Illinois—

Question: Yes or no.

Mr. Cowan: All right, I do exactly like my competitors, yes, I do like they do. Does that answer it?

As I said, we have over 300 graduates who have taken our work. The vast majority of them are osteopaths, next are the medical men. We have a smattering of other practitioners. In the state of Illinois we have no chiropractic license. These men are on a plane with the medical men, almost. They can sign death certificates. They are permitted to practice. If they come to us we teach them the work. If it is wrong, if you people think so, we are willing to change it, if they do.

Dr. Reogle: I would like to know what is the use of so many funny names? Why not call it the oscilloclast? That was the original name.

Mr. Cowan: That is a very good question. Why not call it the oscilloclast? Unfortunately, we are living in an age where it is not heaven yet, and if a name is perfected by any one individual and copyrighted, no one has a right, even if they so desired, to name their apparatus after that. Iso means the same, clast means to break down. That is the principle of our treating machine. We break down by similar vibrations. That is why we call it isoclast. The word oscillo is different.

Dr. Reogle: Oscilloclast, clast means to break, does your machine mean any more than that?

Mr. Cowan: If I would use the word oscilloclast, I could not use it if I wanted to.

Dr. Cowan was no modest violet in discussing his apparatus: "In the diagnostic machine," he said, "we check up Dr. Abrams. We don't maintain that Dr. Abrams was wrong, but he knew nothing of what he was talking about." It is the opinion of most of the electricians who have investigated

Abrams' device, that Abrams knew little or nothing at all about the fundamental facts of electricity.

Were the cult still active, it might be worth while to recapitulate some of the many data accumulated by the American Medical Association of attempts to study scientifically the Abrams apparatus and to submit Abrams and his followers to tests under scientifically controlled methods. The blood of a guinea pig, and a lady guinea pig at that, was sent to an Abrams practitioner in Oklahoma City, purporting to be from Mr. P., whose history was sent with it. The Abrams practitioner submitted one of those remarkable diagnoses of all sorts of diseases with various ohms of resistance. Yet a postmortem of this virtuous, unsuspecting lady guinea pig showed her to be suffering from none of the highly unvirtuous complaints which were accredited to the blood that she yielded. Then the blood of a most gentlemanly guinea pig was sent to an Abrams practitioner in Albuquerque, and the astounding report was returned that this remarkable animal suffered from a streptococcic infection of his left fallopian tube. He had shown no female characteristics up to that time, and a postmortem examination yielded no evidence of ladylike attributes. Similar experiments were made with all sorts of Abrams practitioners in all parts of the country and with equally preposterous results. When I asked Mr. Upton Sinclair what he thought of these experiments, he said: "I think that was a dirty trick to play on a man like Albert Abrams."

The apotheosis of Abrams' career came with the introduction of the sphygmo-biometer, to be used in diagnosing the presence of oil beneath the surface of the earth. One thing about oil, however, it is either there or it is not. Somebody digs down to prove its presence or absence. But a lady may be told that she has a cancer, which is promptly relieved by the Abrams machine, and since she never had a cancer in the first place she is found in many summer resorts bragging about her cure. It takes an X-ray and most times an operation to determine the certain presence of this internal cancer.

THE QUACKERY OF ALBERT ABRAMS

This remarkable cult naturally attracted wide attention in the daily press. It became a common subject of newspaper consideration, and astute editors of magazines saw opportunity for exploitation. Early in the history of the cult, *Pearson's Magazine* succumbed to the Abrams publicity. On the other hand, the *Dearborn Independent*, perhaps stimulated somewhat by Mr. Ford's anti-Semitic leanings, revealed the fallacies and interests underlying the Abrams exploitation. Again the *Scientific American* published a series of articles constituting a complete investigation of the Abrams matter which showed it to be quite without reason.

ABRAMSISM IN ENGLAND

In January, 1925, the *British Medical Journal* published the full report of a British committee on a device developed by one Dr. E. W. Boyd, apparently a disciple of Abrams, who had developed what he called an "emanometer." One of the members of this committee, an engineer named W. Whatley Smith, soon came to light as the author of articles in several periodicals addressed to the public, in which he featured the findings of the committee, emphasizing his belief that the results had to some extent established the principles underlying the observations of Dr. Abrams. One of his articles was headed with the direct question: "Did Dr. Abrams Make A Real Discovery?" To that the answer is obvious. Since time immemorial it has been known that a certain number of credulous persons will always be found who will believe anything that they cannot understand; this, after all, was the great discovery of Dr. Abrams. The complicated machinery that he devised for extracting the shekels of the unwary was the *modus operandi* for putting his discovery to practical effect.

In Mr. Smith's statement as to the work of the British committee he omitted many facts which can be gleaned by careful reading from the original report. In the first place, Dr. W. E. Boyd derived his knowledge of the Abrams device from X-ray pictures of the apparatus, since he had contracted not to open it. He concluded that the Abrams resistance box

was not a resistance device, but a coil wound for inductance. Sir Thomas Horder, the head of the committee, emphasized that the Boyd apparatus is not the Abrams apparatus. "It is commonly but erroneously supposed," he said, "that the instrument of Boyd is no more than a minor variation on that of Abrams, whereas it appears actually to be a design *de novo* based on a different conception of the phenomena involved." Sir Thomas Horder also pointed out that none of the members of the committee mastered the technic for themselves and that they depended on the work of the exponents of the method; he thanked Dr. Boyd particularly for lending himself to the work.

In analyzing the results it may be important first to point out that attempts were made to measure electrically the changes alleged to occur, thus avoiding the percussing tests on the abdomen of a human, but that this was found impossible. The results were indeterminate and the committee does not even report them. Let us consider then the report on the tests of the sputum, to which Mr. Whatley Smith refers. A first series of tests was carried out in London. Here Dr. Boyd endeavored to separate correctly twenty pairs of specimens of sputum taken from two patients chosen and approved by one Dr. McCrae. "The outcome of the test was unfavorable to the technic," says the report, "for of the results returned by the exponents only eleven were correct, while nine were wrong; which is just the kind of result which would be expected if chance alone were operative." Mr. Smith says nothing in his paper of this test.

The report points out that Dr. Boyd sent a memorandum to the committee ascribing his failure to the fact that the arrangements were not satisfactory and that the time required for checking the specimens caused them to become stale. He then arranged for another test in his own laboratory, in which he supplied the specimens and in which the only ones present were Mr. Whatley Smith, Dr. Boyd, Dr. Boyd's secretary, and two Glasgow boys who were the subjects. It was this test which Mr. Whatley Smith glorifies as one hundred per cent perfect. No real scientist who reads

THE QUACKERY OF ALBERT ABRAMS

the details of the tests conducted for Mr. Whatley Smith will feel anything but a sort of pity for Mr. Smith's credulity. One can remember in this connection only similar groups of investigators who have been the willing scapegoats for thinking horses, spiritualistic mediums, and hysterical malingerers. Indeed, it occurred to the representatives of the committee that Mr. Smith might have been overenthusiastic, so the full committee, including Sir Thomas Horder, Mr. E. J. Dingwall, and Dr. Heald proceeded to Glasgow for a repetition of the tests exhibited for Mr. Smith. The whole committee was satisfied. That is the sum and substance of the tests made in England to determine whether or not the Abrams ideas were sound and the Abrams devices trustworthy.

A real scientist would have drawn the conclusion from these tests that Dr. Boyd, in his own laboratory, using certain electric apparatus, had apparently been able to distinguish between two specimens of sputum through a change in the percussion notes of the abdomens of two boys with whom the sputums were connected electrically. Instead, the committee drew the conclusion that these experiments establish to a high degree of probability the fundamental proposition underlying the apparatus designed for eliciting the electronic reactions of Abrams. They have the saving grace to say that the whole thing is extremely elusive and highly susceptible to interference and that it would be premature even to hazard a hypothesis as to the physical basis of the phenomena described. As is obvious to anyone who can read, the experiments have nothing whatever to do with the diagnosis of disease. Realizing perhaps the dangerous use that might be made of their conclusions by the followers of Abrams, the committee stated their view on this point in no uncertain terms:

"To sum up," they said, "the conclusions arrived at in this communication leave the position of the practicing electronist as scientifically unsound and as ethically unjustified as it was before. They give no sanction for the use of E.R.A. in the diagnosis or in the treatment of disease. Nor does

there appear to be any other sanction for this kind of practice at the present time."

THE DEATH OF ABRAMS

On January 13, 1924, Dr. Abrams departed this life, succumbing to an attack of pneumonia. He left behind him considerable property and several relatives, together with a will indicating his desire that a school be established for perpetuating his electronic methods and his discoveries. Promptly suits were instituted involving the property thus concerned. Electronic practice had paid well, as is apparent from the fact that the available assets amounted to at least a million dollars, not including the value of the patents for the Abrams devices. These patents are obviously worthless without the promotion of an Abrams behind them and if one is to judge by the available evidence, the future will show only diminishing returns. Indeed, in filing her suit, the sister of Albert Abrams pointed out that the organization of the college, the charitable institution which he had in his lifetime established, was merely a profit-making concern of Dr. Abrams and was his individual property. But now the Abrams College no longer functions except as the address of an alleged Abrams research organization.

It is common in the history of cults in medicine that they live as long as there are two reasons for their existence: (1) The survival of and promotion by the major prophet who inspires his followers by his personality, his enthusiasm, and his methods; (2) the existence of funds to a considerable amount, administered by trustees who cannot reach the principal, and capable of earning additional funds which are devoted to the perpetuation of the cult. So far as electronic medicine is concerned, the major prophet has passed and there seems to have appeared on the horizon thus far no chief disciple of his unusual personality. On the other hand, the funds left by Abrams constituted a juicy bone for which the attorneys for his relatives and representatives of the electronic organizations contested mightily. Apparently an agreement was reached whereby the institution elaborated by

THE QUACKERY OF ALBERT ABRAMS

Albert Abrams for the promotion of his methods and his devices is perpetuated. So long, therefore, as these funds are not detoured from that purpose there will be a few electronic practitioners to ply the public with their method of diagnosing and treating disease. It has been customary to characterize such methods as pseudoscientific. To use such a term in connection with the Abrams technic and devices is to dignify them far beyond their merit. They are, in fact, only the continuous proof that a considerable number of people are willing to believe anything that they do not understand. The possibilities of financial gain invariably attract many who are willing to believe so long as belief constitutes a source of income.

EVOLUTION OF THE ABRAMS NOTION

It has been said that whenever a new idea develops in any field it becomes the source of innumerable similar extraordinary conceptions. Attention has already been called to the neuro-calometer developed by B. J. Palmer to get aboard the Abrams band wagon, exactly as Abrams developed that to take advantage of the public interest in osteopathy and chiropractic. Shortly after the appearance of Albert Abrams upon the medical scene, Gaylord Wilshire of Los Angeles brought to public attention, through extensive announcements in the press, a device which he called the "Ionaco," and which Arthur J. Cramp, Director of the Bureau of Investigation of the American Medical Association, rechristened the "magic horse collar."

The Ionaco, briefly, consisted merely of a coil of wire inside a second coil. The second coil was connected with the house current. Sometimes there was placed at the end of the second coil a little light. Exactly as the moving point on the dial of a gas meter, or the deflecting needle of a galvanometer will fix the patient's attention and thereby enhance the power of suggestion, so also will a little light serve this purpose. The patient was told that he might be rid of any chronic disorder merely by placing this device around the neck and turning on the current. It was said that by this

means a magnetic field was created and that this magnetic field controlled all disease by magnetizing the iron in the blood. If the reader has ever attempted to pick up a piece of spinach with a magnet, he will ascertain how utterly preposterous is this notion. The iron in the blood is organic combined iron exactly as is the iron in spinach, and there is no evidence that the creation of a magnetic field in any way influences such combined iron. However, even if the hypothesis were true, there would still be no reason for magnetizing the iron in the blood to overcome tuberculosis, heart disease, disease of the kidneys, or similar disturbances.

Gaylord Wilshire sold these devices for \$55 cash or \$65 on time payments, and thousands of them were sold by his methods of promotion. Shortly after the development of the device Wilshire himself died of a disease of the kidney in a New York hospital, no doubt without the benefit of his own invention. He was a remarkable charlatan. Twenty-five years previously he had first attracted public attention by selling gold mines to socialists on time payments, one dollar down and one dollar a week. Then he came to public notice through speculation in subdivisions outside Los Angeles—somewhat the same type of financial promotion. However, the City of Los Angeles still perpetuates his name in the Wilshire Boulevard and the Wilshire Building.

Following the death of Gaylord Wilshire, hundreds of imitators brought similar devices to public notice. They were christened variously, as the "Ionizer," the "Theronoid," the "Restoro," and many other appellations. All were promoted with the same type of publicity that sold the Ionaco. No doubt the greatest sales were secured by the use of the radio. Of the use of the radio in the promotion of quackery, more will be said in a later chapter. The modern charlatan avails himself of this, as of every other method, of publicity.

One of the most remarkable examples of the power of suggestion was demonstrated in an exhibit of the Restoro in a Chicago salesroom. Following a morning of fatiguing work in nearby department stores, employees would stop briefly for luncheon in a restaurant in which all of the seats had, as

THE QUACKERY OF ALBERT ABRAMS

Irvin Cobb put it, elephantiasis of one arm. They then proceeded to the exhibit of Restoros and sat fifteen or twenty minutes quietly in a chair with the Restoro device about their necks. At the end of the treatment they readily signed testimonials stating that they felt much better on leaving than when they came in. The observation was entirely true. What they failed to take into account was the fact that their ordinary routine did not include luncheon followed by twenty-five minutes of enforced rest. The Restoro device was simply the intermediary that made the rest compulsory. This is what scientific medicine calls an uncontrolled experiment.

It has been difficult to separate from the scientific field of physical therapy the remarkably important powers inherent from the point of view of suggestion in shooting sparks, brilliant lights, and similar electrical manifestations. It is proposed later, in a discussion of the rise of physical therapy, to analyze some of these methods.

"PHYSICAL CULTURE," BERNARR MACFADDEN, AND GLUTTONS FOR EXERCISE

"Exaggeration is in the course of things. Nature sends no creature, no man into the world without adding a small excess of his proper quality."—Ralph Waldo Emerson on "Nature."

THREE types of persons are interested in health: those who are well; those who are sick; and those who are well but who think they are sick. In these times, the interest of those who are well is present, albeit apparently somewhat slight and casual. The interest of those who are sick is intense, but transitory; when they are well their interest tends to lessen.

The interest of those who are well but who think they are sick is constant and pitiful; they form the substance on which the "patent medicine" mongers have thrived since time immemorial; they constitute, in large part, the great audience for false prophets of health, as well as for those who are attempting to give honest information about the body and its care in health and in disease.

Nineteen thirty witnessed the appearance on the literary scene of several biographies of Bernarr Macfadden, one of them indeed almost a self-revelation, since it came from the pen of Fulton Oursler, adviser to the Macfadden publications, and so intimate with their control that his wife has published her chats with the Macfadden family. As Allene Tamley remarks in a consideration of these three *opera* in the *Outlook*, "There has never in our history been a national hero so important as to rate three biographies in a single

day." True, Washington, Lincoln, and Roosevelt have been favorably mentioned, and indeed unfavorably on various occasions, but the great Bernarr bursts upon the scene like a charge of T.N.T.

Our hero greeted the morning sun on a hot August day in 1868 near the village of Mill Spring, Missouri. Both parents died before he was eight years old. Successfully overcoming the common diseases of childhood, he ran off to St. Louis and began to develop himself in a gymnasium. The records reveal that he was no mean opponent on a wrestling mat.

With this background he began to promote himself as a "kinistherapist." A kinistherapist, for the information of my readers, is a person who treats muscles or who concerns himself with their motions. By 1899, when he was 31 years old, our hero had already begun to display for an interested public those poses of his body which revealed vast areas of cutaneous tissue, and which have made him known since that day as "Body Love Macfadden."

In his earlier publications he associated his promotion of physical culture with advertisements for various cures, with announcements of hair culture, and with insinuations regarding available books on delicate subjects. Gradually this publication evolved into *Physical Culture*. Quite promptly he attracted the attention of that protector of public morals, Anthony Comstock. Raids on his New York office resulted in removal to New Jersey, where he was arrested and charged with sending lewd and obscene matter through the mails. For this he received a sentence of two years' imprisonment and a fine of \$2,000. Eventually the sentence was remitted, but the Government has not yet returned the \$2,000.

With this introduction, let us consider some of the medical notions promulgated in what is alleged to be a non-medical periodical, namely, Mr. Bernarr Macfadden's *Physical Culture*. The type of fiction and general literature issuing from the Macfadden press is another story. If Mr. Macfadden were to content himself purely with preaching the gospel of simple diet and adequate exercise, one could

have no fault to find with him, except that he utilizes the erotic appeal in his teachings.

The manner in which the sex appeal is used by the Macfadden periodicals has been duly criticized by numerous observers, and perhaps nowhere else so well as by N. H. Bowen, in a brief discussion in the *Detroit Saturday Night*.

Mr. Bowen says, in a consideration of the Macfadden string of periodicals: "The important thing to note is that in every one of these stories the suggestion is of something relative to sex; in fact, these two magazines reek of sex."

It needs no reading of the Macfadden publications to convince any sound observer that their appeal is primarily sexual and erotic. The covers, invariably in the gaudiest of colors, are devoted to pictures of women in various stages of nudity, usually sufficient, however, to avoid conflict with the postal authorities. The illustrations place emphasis on the beauties of the salacious and the cabaret, rather than on the higher types of art which have less sex appeal. Even the illustrations of the crude stories that form the basis of the Macfadden literature are the old male and female struggle type or the slow fadeout rigid clasp that featured the movies in their earlier and rawer stages.

The fiction of the Macfadden periodicals is quite frequently of the so-called confession type. Perhaps these confessions are true, but if they are, their appeal lies, not in their truth nor in any moral lesson that they may teach, but in their essential suggestiveness. Of literary value they have none, and their duration is as evanescent as the paper on which they are printed.

However, we are concerned here not so much with the exceedingly low scale to which the Macfadden literature is pitched, as with the false campaign of health which his periodicals promote.

It does not suffice Mr. Macfadden to prove that good health may be achieved through proper diet and proper exercise; he seems to have felt that in promoting these desiderata he must attack those phases of the scientific care of

the body that lie within the purview of the scientifically trained physician. In *Physical Culture*, he has attacked primarily those who use methods and knowledge which are not available to him through the fact that the law is inclined to protect the public by guaranteeing to some extent the sanctity of the M.D. degree.

In his campaign, Bernarr Macfadden aligned himself with the border-line cultists that oppose scientific medicine and devote themselves to the promotion of some single conception of disease causation, prevention, and treatment.

One finds him promoting actively the interests of the manipulative cults, including chiropractic and osteopathy; of the Abramsites, with their fantastic electronic conception; of the naturopathic cult, with its emphasis on barefoot walking in the morning dew; of colonic flushing with its filling stations and vegetable diet; of the antivaccinationists and antivivisectionists; of the fanatical groups that feel that their personal beliefs are more important than the good of the community; and, indeed, of any of the extraordinary fads which have risen for a moment above the horizon of medical practice only to sink rapidly into oblivion.

One goes through volume after volume of the health faddist's monitor and selects therefrom articles showing how Mr. Bernarr Macfadden has lent himself to the promotion of dozens of now discredited notions. This, however, is unnecessary at this time, since Macfadden has himself indicated his willingness to promote every new notion—it would be beyond the mark to call them ideas. It is, moreover, necessary only to refer to a few issues of *Physical Culture* to see the type of science which Mr. Macfadden is willing to accept.

In one number, one finds a defense of the now completely discredited Albert Abrams, by the completely deluded Upton Sinclair; a defense of naturopathy, by Bernarr Macfadden; and a defense of the unestablished views of W. H. Bates, who believes that it is possible to train a deformed eye to see without glasses, again by no less an authority than Bernarr himself.

There is also an article showing that bobbing of the hair

makes women bald, without the slightest basis in scientific proof—certainly with no actual evidence.

Moreover, two issues contain a symposium devoted to the triumphs of osteopathy, without any recognition of the fact that it never has been shown that the very conditions which form the basis of osteopathy actually exist.

With a peculiar disregard of his own constant and unwarranted attack on medical science, Mr. Macfadden has employed, to bolster his views, such physicians as are willing to take a few dollars for writing articles for the Macfadden magazines.

It should be obvious to any logical-minded man that a physician who has even an ordinary ability to interpret what he reads will know that the Macfadden periodicals have been devoted largely to an attack on scientific medicine, and to discrediting not only the modern treatment of disease but also the campaigns for the prevention of disease carried on by scientific medicine. These campaigns, history shows definitely, have cleared up the plague spots of the world and resulted in the saving of millions of lives wherever they have been applied. It should be obvious to any physician that the lending of his name and his M.D. degree to the periodicals of Mr. Macfadden constitutes a definite departure from his scientific training, and certainly from the ethical ideals which were conferred on him with his medical education. It is perhaps the boast of Mr. Macfadden that he has been able to secure a few—fortunately only a pitiful few—physicians who are willing to contribute to his pernicious propaganda.

Those who have, on occasion, looked into a Macfadden periodical turned but a few pages until they came upon a photograph of the "Bare Torso King"—to confer on him the title originally conferred by the Detroit *Saturday Night*. *Time* calls him "Body-Love" Macfadden.

There he stands, almost in the garb with which nature clad him, a majestic figure with lungs inflated and pompadour defying the world. His skin, if we are to believe his own accounts, is full of vigor and strength. But apparently

the attacks that have been made on his motives, if not on his facts, have been sufficient to pierce even a skin strengthened by all of the methods known to the apostles of physical culture.

In particular, Mr. Macfadden was worried some years ago by an editorial which appeared in the *Ladies' Home Journal*, in which the editor of that long established periodical called attention to the evil that is being spread by sex publications. Mr. Macfadden's defense is to claim that many of the great health campaigns for which the *Ladies' Home Journal* is renowned were his own innovation. With colossal impudence he states that *Physical Culture* began twenty-five years ago to expose the patent medicine takers, and that the *Ladies' Home Journal* took up the fight only after *Physical Culture* had started.

And this in a periodical which has always reeked with the advertisements of nostrums and fallacious health systems!

It is claimed further that *Physical Culture* originated the campaign against venereal disease. And this in a periodical which by its refusal to recognize the scientific facts concerning venereal disease may contribute to the spread of these diseases.

It is the belief of at least many editors that the Macfadden periodicals, with their sex stimulation and appeal, promote unchastity. The refusal to recognize that such conditions as gonorrhea and syphilis are caused by definite bacterial and parasitic organisms will help to prevent the dissemination of knowledge as to the way in which these diseases may be prevented through the use of antiseptic substances. It is this Macfadden who claims that he has contributed greatly to the war on venereal disease!

It was the view of the intelligent Greeks that the human body well taken care of is a holy and spiritual thing. The laws of health and hygiene which they promoted were such as bring the body to a high state of perfection and discourage immorality and salaciousness in relation to health. The Macfadden gospel is essentially an appeal to a large minority of persons whose eyes are aroused by the flash of nakedness or

whose weakened wills succumb to every new health fad. He has taken what should be a beautiful search for health, for vigor, and for strength, and made of it an ugly and discouraging thing to every right-minded individual.

GLUTTONS FOR EXERCISE

The Macfadden gospel is primarily the belief that big muscles are synonymous with health and that exercise is the road to this goal. One of the difficulties with the whole physical culture and athletic movement has been the creation of outdoor fanatics, marathon runners, hundred mile pedestrians, and similar enthusiasts who believe that the road to health lies in the exceptional performance rather than in well conducted and suitably regulated physical activities.

One of the most amusing performances ever witnessed by the people of these United States, directly or in the movies, was the cross-country marathon promoted by C. C. Pyle. In this foot race from Los Angeles to New York, some 200 runners started, and about a quarter of this number finished the 3000 mile grind. Just what that was planned to prove, or just what relationship it might have to the general subject of health, has not yet become apparent.

No doubt, the one hundred mile walker is a healthful person or he could not walk a hundred miles, but the average man has little occasion to walk one hundred miles and does not need the hundred mile equipment. Man, like other domesticated animals, did not always live indoors. Modern investigations indicate that a certain amount of time outdoors is beneficial to health. But outdoor exercise to the point of overfatigue, of irritating sunburn, or of undue exposure to the elements is likely to do as much harm as good.

Various authorities have suggested the amounts of muscular activity desirable for persons of various ages. Hetherington of the University of California suggested four hours of muscular activity at the age of five years, five hours from seven to nine, six hours from nine to eleven, five hours from eleven to thirteen, four hours from thirteen to sixteen, three

"PHYSICAL CULTURE," BERNARR MACFADDEN

hours from sixteen to eighteen, and two hours daily from eighteen to twenty as the proper amounts.

Williams states that one hour should be given daily to activities involving the use of the large muscles of the body after 20 years of age, and that anything less than that will result in physical deterioration.

Men should not live for the muscles alone. Think of Sandow! Think even of Bernarr Macfadden! And when you think of them, what have you got? But maybe some people want to be Sandows and Macfaddens.

Calisthenics, daily dozens, and similar exercises are valuable within limitations, but our tendency is to become exercise fanatics if we do not become fanatics about something else. The tendency is dangerous. There is no royal road to health by means of any daily dozen, or any other exercise formula promoted by some former trainer of prizefighters with the aid of good advertising agencies.

The chief advantages of exercise are that the body's general chemistry and physiology are stimulated, the circulation is aided, and the elimination encouraged.

There are no magical formulas in exercise that will guarantee freedom from disease or the presence of what is commonly called "pep," vim, vigor, and vitality. The latter characteristics seem to be just as much a part of the mental disposition as of the physical state. Keeping young, vigorous and happy depends largely on one's state of mind.

After all, what does the average person accomplish by his exercise? The physiologists have found that a healthful man, with well developed muscles, who is working very hard, can sustain an average output of about one-tenth horse power for eight or ten hours. If he works himself up to an output of two-tenths horse power, he is exhausted in two or three hours. Expert rowers in racing shells can work up to five-tenths or six-tenths horse power, but they are all through after 20 minutes.

An automobile engine or any kind of motor gets far more done with less wear and tear on the machine than occurs with the human machine. For 10 or 15 seconds, the amount

of time required for a 100-yard dash, a human being can develop, according to Haggard, as much as three to three and a half horse power. But what of it? Any kind of an automobile engine does better than 20 horse power.

THE SHAKING MACHINES

About 1857 a Swedish physician named Dr. Gustav Zander began to use mechanical means for massage and exercise. These machines were the first ever used for the purpose. Since that time various devices have been developed, including the hobby horse, popularized by Mr. Coolidge, and all sorts of vibrators, shakers, and springs, as well as machines for manipulating and vibrating the muscles of the human body.

In a consideration of the use of these machines, the Council on Physical Therapy of the American Medical Association condemns them, although not unreservedly, for several reasons. In the first place, it is felt that the psychology that their use develops in the patient is wrong, since they convey the impression that the machine has curative qualities and that it is unnecessary for the patient to do anything, but that he can leave everything to the machine.

It is argued that the machine will accomplish things that cannot be accomplished by simple exercise, but in the instance of extra fat around the waist actually better results are accomplished by leg and abdominal exercises without apparatus, and better results for weight reduction can be accomplished by a walk or slow run in the fresh air. The machines treat only one part of the body at a time and do not have the advantage of general exercise in developing other parts of the body.

Indeed, the Council on Physical Therapy points out that vibratory massage of the abdomen with a strap attached to a motor for ten minutes cannot give as much benefit as a ten minute fast walk with conscious effort given to holding in the stomach and abdomen.

The tendency is for people to become very tired promptly

"PHYSICAL CULTURE," BERNARR MACFADDEN

of the shaking devices and hence to discontinue all exercise. Moreover, a few instances have been reported in which people with appendicitis, or rupture, or ulcers of the stomach have been seriously injured by using these machines without any adequate knowledge of their physical condition.

THE BIG MUSCLE BOYS

"Although men are accused for not knowing their own weakness, yet perhaps as few know their own strength."—Jonathan Swift.

TURNING the pages of a periodical like *Physical Culture*, or noting the pages devoted to sport in our daily press, one might become impressed with the notion that the chief goal of man is muscle. Not that Bernarr Macfadden, the "Bare Torso King" neglects the mind, for in the Macfadden string of periodicals was one known as *National Brain Power*.

But most of the great gospel is the lauding of strength both as a means and an end—of strength for strength's sake. And not just ordinary strength, but the kind of strength that bends crowbars between the teeth, bites chains in two, lifts a team of horses and carries five or six men posed in artistic designs, while giving huge grunts to the accompaniment of an orchestra.

Once upon a time there was only one "Bare Torso King," the pictures of whose powerful frame thrilled the multitude as he appeared clad only in a breech clout, with fists clenched and gorilla-like chest pumped out like that of a pouter pigeon. But nowadays as one turns the pages, he comes upon coupon after coupon, inviting him to subscribe, urging him to inquire, pleading with him to be strong.

As the reader scans the advertising literature and the other material that he receives when he sends the coupon, he will observe a remarkable sameness. He will derive from

THE BIG MUSCLE BOYS

his observations certain fundamental opinions as to why the exponents of muscularity are engaged in the business of selling muscle-building courses and as to the kind of persons who fall for such courses.

He will probably discover that there is a peculiar appeal in the portrait of the nude that is cleverly worked on by the bare torso gentlemen to secure their clients. He will find, no doubt, that these gentlemen are not suffering inordinately from modesty as to their own accomplishments, and he will probably become convinced that their business is one that is profitable.

Let us first glance over a few of the leaders in this unique occupation.

INTRODUCING L. W. ALBIZU

Consider first Prof. L. W. Albizu. He is—or was—the inventor of the Roller Dumb-Bells—“The World’s Quickest Way to Strength.” He has a system; in fact, each of the bare torso gentlemen has a system, and Professor Albizu admits in connection with the exploitation of his system that he is “the sensation of the physical culture world.”

Apparently all that you have to do to become strong by the professor’s method is to roll his dumb-bells up and down the wall. He does not give you a diploma, and he emphasizes this fact because some of the big muscle men do give you a diploma. Professor Albizu gives you a health and strength course at \$20 cash or \$22 on time, and, with it, you get a pair of dumb-bells—or perhaps you are a dumb-bell—who knows?

Of course, he has a question blank, because mail-order physical culture, these gentlemen all carefully explain, can only be properly conducted on those who are sufficiently healthful to stand the rigors of the exercise. Still it is advertised to make the weak man strong. But Professor Albizu is not unduly curious. Chiefly, he wants to know your measurements, if you have ruptures, if your neck is short or long, and if your collar bone shows when you stand naturally.

INTRODUCING CHARLES ATLAS

Alphabetically next comes Charles Atlas. Somehow Atlas is such a good name for a strong man that one hesitates to believe it a real one; but maybe it is.

Atlas has occupied many a page with his advertisements in the physical culture magazines. He offers "Health—Dominating, Wealth-Winning Health." He emphasizes "Big Powerful Muscles," and he tells you that Atlas-trained men are "Personality" men. "My system," says Mr. Atlas, "is the last word in Health and Energy Building." "I give only actual instructions, high-powered secrets (all of these mail-order Samsons have secrets) that do get the quick and certain results. And who could be Better qualified to teach you these amazing secrets than the World's Most Perfect Man?" Curiously, each of these bare torso gentlemen is the world's most perfect man. Or is that Clark Gable?

So you clip the coupon and send for "Secrets of Muscular Power and Beauty." It's free—absolutely free. "Scores upon scores of vital, inspiring pages of information and beautiful art pictures yours FREE." (All of these bare torso gentlemen emphasize the beautiful art pictures that are free.) We will not try to duplicate the different kinds and sizes of type that an Atlas advertisement uses; our printers might object. But besides the type, there is a little insert that tells you about your chances to get free "seven large photographs of myself" as well as "cash prizes, expensive trophies, and beautiful diplomas." Where is the farmer's boy or the dry goods clerk that could resist an appeal like that?

The reader sends the coupon and the Atlas book comes. A letter comes also with more capital letters than a Hearst editorial. Charles Atlas tells you in the mimeographed personal letter that he himself is full of "boundless energy," "great power," "wonderful strength," and "radiant, vibrant health." He is glad "for your sake" that he has it and can transmit it to you. No apparatus is required. He pleads with you to send \$30 cash or \$35 on time in payments for his course. To prove to you how good he is, he encloses some

THE BIG MUSCLE BOYS

circulars showing four or five other gentlemen with clenched fists, puffed out chests, and breech cloths, breaking up iron chains and posing for Ajax defying the lightning. These bare torso gentlemen, it seems, are graduates of Mr. Atlas' course. And ah! how Mr. Atlas pleads with you in connection with each of these photographs. Indeed, he rises at last to these heights of beautiful sentimentalism:

WHAT WILL THEY THINK OF YOU?

Your sweetheart—you know what kind of a man she expects you to be. Are you going to disappoint her? Will you let all her dreams about her lover fall to the ground? She wants you to be a virile, manly man, full of strength and power, able to protect her. Your mother—she expected great things of you. She hoped you'd grow up a splendid example of vigorous manhood. Don't let her hopes of you be shattered. Resolve now to make something of yourself. Refuse to be a weakling. Health and strength can now be yours.

The confidential question blank with the questions compiled by Mr. Atlas, or his advertising agent, seems to be calculated particularly to appeal to the psychoasthenic and hypochondriac.

Mr. Atlas wants to know, among other things, if you are "nervous or fearful?" "Despondent, angry, worried, irritable at times?" (Who isn't?) "Have you any harmful habits you wish to overcome?" (This is the old appeal, based on ancient beliefs as to the dangers of certain sexual habits.) "Is your will power weak or strong?" "Are you sexually weak?" "Are you timid, shy, bashful?" And so on and so on!

And then, "If you really crave Superpower, Glorious Health, Uncanny Strength, Tremendous Nerve Force and a Perfectly Developed Body Mail This Enrollment Blank Right now."

So much for Mr. Atlas!

INTRODUCING MR. BREITBART

Mr. Breitbart, ladies and gentlemen! He has learned "not only the wonder of being strong but the secrets—the knack

—of acquiring tremendous strength.” In fact, his system has given him “such marvelous strength that people refer to me as the Superman of the Ages.”

We warned you, reader, that these bemuscled gentlemen were in no sense to be compared with the modest violet. But Mr. Breitbart shames the chrysanthemum or the rhododendron:

There is nothing else like my method and there is nothing else that will as surely or quickly give you the big, bulging muscles and crushing strength that every red-blooded man wants.

See what I have been able to accomplish myself, by the use of this system. I support more weight than any other man. I drive heavy nails through many layers of oak and iron with my bare hands. My muscles are trained. I am able to bend heavy steel bars into carefully worked designs. I perform feats of strength that astonish thousands with the sheer power of muscle that my system has given me; and this same method can give the same power to you.

Like Mr. Atlas, Mr. Breitbart has secrets; he not only has his own secrets, but he admits that he knows everybody else's secrets. And he continues, “mine is a new and far better method, unlike any you have ever seen or heard.”

All you need to do is to send for Mr. Breitbart's new book. He has been offered real money for this book, he tells you, but he is willing to give it to you for a dime to cover the cost of mailing. Send him a dime at once, and you will get not only his book but also “Breitbart's Muscle Meter” FREE.

As can be imagined, for your dime you get quite a package. You get first Mr. Breitbart's book entitled “Muscular Power,” showing on its cover Mr. Breitbart in the act of pulling open a tiger's mouth. Now that's the kind of accomplishment so many of us need; Mr. Breitbart does this sort of thing quite as a matter of routine.

Next you get to see a picture of Keith's Theater in which Mr. Breitbart performed; then you get to see Mr. Breitbart

THE BIG MUSCLE BOYS

and his muscles from the waist up, including, also, a most aggressive pompadour.

Then comes the text matter with such headings as "Muscle Rules the World," which tells you that exercise and muscle building make success. By this time, evidently fearing that he may be thought a braggart, Mr. Breitbart coyly makes this little disclaimer:

I do not wish to be thought egotistical or go about shouting and blowing my own horn. I leave such praise to others and I hold myself far above such cheap and unbecoming practices. I determined in this book to let others tell you all about myself.

Then follow page after page of clippings about Mr. Breitbart and photographs of Mr. Breitbart when Mr. Breitbart was on the vaudeville stage. There is Breitbart breaking a heavy iron chain with bare hands—with a closeup of the chain—Breitbart bending and coiling a one-half inch thick iron bar around his arms with bare hands, Breitbart biting through a heavy iron chain which six husky men were unable to break apart; Breitbart resting on a bed of nails supporting a bridge with a man and an ox weighing over a ton.

And so on and on and on interminably: Breitbart after Breitbart—and muscle after muscle, until at last one comes to the pages of testimonials and the photographs of the pupils, and the final plea to "Fill out and mail the enrollment blank at once."

We are convinced that Charles Atlas was the world's most famous man, but here is Mr. Breitbart's claim.

Muscle by muscle, inch by inch, Breitbart easily outstrips every claimant to Strength and physical development—surely he is the Superman of the Ages.

Nevertheless, Charles MacMahon of Philadelphia, about whom we shall speak later, outstrips Breitbart—he doesn't even wear a breech clout.

Mr. Breitbart's free "muscle meter" is a piece of red paper

that you paste around your biceps muscle. Then you bend your arm and if your muscle is as big as Mr. Breitbart's you can break the paper. We refer here not to the strength of the muscle but to its volume. Mr. Breitbart's isn't stingy. He gives you a paper tape measure in addition to the "muscle meter," and he gives you a money-order blank all filled out ready to send him \$25 cash or \$26 on time. Mr. Breitbart also has a confidential information blank in which he inquires if you are subject to colds, asks about your appetite, and if your temperament is nervous and emotional, or quiet and steady. Naturally Mr. Breitbart has to know these things to plan your course.

INTRODUCING EARL LIEDERMAN

Mr. Earl Liederman offers you ten more years of life. "I don't claim to cure disease," he says. "I am not a medical doctor but I'll put you in such condition that the doctor will starve to death waiting for you to take sick."

Earl Liederman fixes you up in ninety days and he requires two pages of advertisements to tell you about it—one devoted to Mr. Liederman *au naturel* and the other to his announcement. When Mr. Liederman is through with you, you are a real man, he says. He tells you about your deep, full chest, your huge, square shoulders, your massive, muscular arms, the flash to your eye, and the pep to your step.

All you have to do is to send for his booklet "Muscular Development." It contains, as by this time you will have come to expect, forty-three full page photographs of himself and his pupils. There are the bare torso photographs in every conceivable posture, and there are six bare torso pupils. Then, at last, there is a letter asking \$28 in cash or on time. It is the same old postal money-order blank, the same old imitation personal letter, the same old questions and the same old mention of the necessary apparatus. And, if you fail to bite, finally there come to you week by week the same old follow-up letters.

CHARLES MACMAHON

You have been told that Charles MacMahon outstrips them all—at least so far as shown by the pictures in his little booklet. As you might easily have anticipated he has a little booklet. All the mail order Herculeses have little booklets. If you sent for Charles MacMahon's little booklet, it was probably in response to the "ad" in which he cautions you not to be a "flat tire."

All of the emphasis in the "ad" is on flatness. If you have a flat chest, he offers to puff you up; if you have flat feet, if you have a flat pocketbook—but no, it seems he doesn't fix flat pocketbooks. He merely says that ill health means a flat pocketbook and he is going to save you all the expense that ill health entails by putting you in A-1 physical condition. Indeed, flatness appears to be an obsession with Charles MacMahon: "I Flatly Refuse to Let You Pay One Cent," he says in big type, but he continues in little type "either on my booklet, my pamphlet, or toward defraying my expenses of wrapping, postage and the labor of getting them to you." But when you do get them, then comes your opportunity to spend money.

First, there comes the page of bare torsoed gentlemen who—we are asked to believe—have taken the MacMahon course; also the testimonials of these Samsons. Next there is the little booklet entitled "The Royal Road to Health and Strength" by Charles MacMahon. Here and there among the many photos of Mr. MacMahon which illuminate every other page, one finds remarkable statements. For instance on page 6, the text reads:

A man with a squarely built, well muscled waist rarely suffers from disease of the digestive and dissimilative organs.

We have been trying to find out what a dissimilative organ is; the word intrigues us.

Charles MacMahon learned his technic from the Hindu wrestlers, so he says, and he specializes on the legs and the waist. This is Charles MacMahon's "system." All the bare

torso gentlemen have "systems" in every sense of that unusual word. He also has an apparatus, although not a rubber or a spring apparatus. You may have noted that these exponents of the science of physical culture have been unable to agree on the desirability of apparatus or on any one apparatus. Indeed, no two of them have agreed. Every bare torso king has an apparatus all his own.

Mr. MacMahon offers you nine separate lessons at intervals of ten days. With each lesson you get a set of separate pictures. The price is \$30 and includes the necessary apparatus. If you pay \$24 cash, you get the new \$30 tumbling and hand-balancing course free. Suppose you don't accept right away. Let us tip you off. It will be to your advantage. Wait for the second, or third, or fourth, or fifth offer. If you wait long enough Mr. MacMahon throws in more courses, personal service, and a magazine subscription.

Finally, may we point out that the MacMahon question blank asks only for measurements and doesn't even make a pretence of finding out if the applicant ought to be indulging in strenuous exercises? Perhaps it is quite suitable for Mr. MacMahon to lift up the columns of buildings and to toss around 200 pound weights. But how about the man with high blood pressure, arteriosclerosis, or disease of the heart? Does Mr. MacMahon care? Or does he take the attitude that the fellow who wants to spend \$30 and take a chance at rupturing a blood vessel or overstraining his heart should have that privilege?

MICHAEL MCFADDEN

This gentleman modestly admits that he is the "Champion of Champions." His name is McFadden. For \$8 he sells you the McFadden Patented 10 Cable Progressive Exerciser. He offers also the Patented Progressive Handles, the Patented Progressive Stirrup, the Patented Progressive Head Gear, twelve weeks' Home Instruction Course, "most wonderful ever written—the kind you cannot get elsewhere"—more secrets, you see!—and finally the Michael McFadden Encyclopedia.

THE BIG MUSCLE BOYS

All of this, which he alleges is worth \$30, he offers for a trivial \$8, and he guarantees to increase your biceps one full inch in from thirty to ninety days and all other parts of your body in proportion. What! All parts? What, ho! His guarantee, he says, is backed by a \$10,000 challenge. Further than this deponent sayeth not!

His saffron colored circular shows some fourteen bare torso gentlemen in various stages of bareness, presumably all brought into muscular beatitude by exercising regularly with the McFadden Patent High Tension 10 Cable Progressive Exerciser, with a resistance of 10 to 200 pounds. One thing about Mr. Michael McFadden—if you don't answer him right away he apparently is willing to let you suffer. You will not have your mail box cluttered up by the weekly or semiweekly follow-up letters. Mr. McFadden lays little stress on his course; his stock in trade seems to be chiefly the name that one conjures with in the mail-order physical culture world and the Patented High Tension 10 Cable Progressive Exerciser and other "Progressive" things.

INTRODUCING LIONEL

Of all the mail-order strong men Lionel Strongfort most merits discussion in matters of health, for he appeals to the fears of the sick and the neurasthenic to a greater extent than do any of the others. The literature that he circulates and his follow-up letters emphasize sexual weakness to the point of nausea. It would be unsuitable to reprint them even for the sake of proof. Letter after letter in his series emphasizes sex and virility and lost manhood. Evidently the promoters of "Strongfortism" have found that there are a sufficient number of psychasthenics with fears as to their sexual powers to make the appeal a drawing one.

The Strongfort course is built around his resistance increasing dumb-bell, "a triumph in athletic apparatus." "The Strongfort is without doubt the handsomest dumb-bell on the market," urge the circulars.

The Strongfort question blank is about like the others,

except for this question, masterly in its barefaced, impudent departure from the facts:

*Any white spots under your finger nails?
(Indicating Uric Acid in the system)*

There is an attempt to play upon the old uric acid bugaboo by frightening everyone who has white spots on his finger nails. And who doesn't have them at one time or another? The fact that the white spots have no more to do with uric acid than with carbolic acid doesn't worry Strongfort.

Besides, the Strongfort blank again and again emphasizes "secret habits," "virility," "night losses," and other sexual matters.

The Strongfort booklet—he has a booklet—is a remarkable concoction of mendacity, attacking well-nigh everything except Strongfortism so far as relates to health and the control of disease. It is illustrated by the usual bare torso photographs, the oak leaf serving the demands of modesty furnished in the other bare torso booklets by the surcingle, leopard skin, or air brush of the photoengraver. The keynote of Strongfortism, aside from the "Resistance Increasing Dumb-bells," is "internal and external muscular harmony." Once everyone has achieved this desideratum by the course and the dumb-bells, the millennium will be reached. Following are a few modest Strongfortisms:

Strongfortism is a panacea for all habits that arise from physical weakness, as all bad habits do, because Strongfortism builds up Strength that resists such habits. There would be no need for Prohibition laws on liquor or any other vices if everybody practiced Strongfortism.

Strongfortism is the key which unlocks Nature's storehouse of vital energy. It reaches and develops the inner muscles which control the vital organs, generating the Life Forces.

The weakling is developed and inspired with the mastery of mental power and physical perfection—the glorious crown of MANHOOD. The dyspeptic and neurotic, whose system is racked by disease, finds rebirth in the quickening pulse of a revitalized body, vibrant with health and energy.

THE BIG MUSCLE BOYS

A person who is rendered immune through a course in Strongfortism is safe against colds, epidemics, and all kinds of diseases, whether catching or otherwise, simply because his internal system is in harmony with the external—every set of muscles works one with the other—every organ is regular and this rhythmical kinetical action gives a volume of vital force which repels every kind of disease. It is the man in ill health or whose vitality is low that is susceptible to catarrh and all kinds of diseases.

Of all the preposterous medical hokum we have ever read, nothing has crossed our vision to equal that appearing in the literature of Mr. Strongfort. If ever superlatives were justified they are justified in discussing his work in relation to that of the other bare torso gentlemen in this series. According to our investigation:

He puts the most stress on sex.

He attacks the most other instructors.

He sends the most follow-up letters.

He makes the most medical claims.

He makes the most extravagant promises.

In only one way is he outstripped and that, as has been mentioned, by Mr. Charles MacMahon.

PROF. H. W. TITUS

Here we are at Professor Titus, last of the series, and ready to confess that reading the claims of these physical culture mail order promoters has made us tired. We have apparently overexercised. We get no kick out of the literature of Professor Titus.

The fact that he announces himself as "The Most Successful Director of Physical and Health Culture in America" does not seem to thrill us. When he asks, "Do you take pride in your personal appearance?" our flagging energy does not revive. His offer of a complete course of Lessons with the Progressive and Automatic Exerciser for \$15 down, \$5 in thirty days, and remaining \$5 in sixty days does not strike our fancy. Even the yellow ten dollar reduction check that comes with the fourth or fifth follow-up letter makes no ap-

peal. Actually the literature and the claims of all of these bare torso gentlemen leave us in a muddle.

One of them curses roundly all other courses that use apparatus; the spring apparatus proponents vilify the rubber band stretchers; the rubber band stretchers attack the spring benders; the dumb-bell workers roast the spring benders and the rubber stretchers; the roller dumb-bell advertiser says the standing dumb-bells are worthless, and the standing dumb-bell promoter announces vigorously that they won't roll off the table. Mr. Strongfort tells us that anybody that bites chains in two is a fake; Mr. Breitbart shows how he bites the chains; Mr. MacMahon develops the waist muscles—that's the secret—but Mr. Strongfort develops the internal muscles; then, too, you will remember Mr. MacMahon concerns himself with the "dissimilative" organs.

If we are to indulge in these strenuous exercises and indoor sports, why not find out first through some sort of physical examination whether or not we are fitted to undertake the stunts of these physical culture professors? Mr. Thomas Rice of the *Brooklyn Eagle* has recently looked into the control of these mail order physical culture courses and the muscle-exploiting gyms. He says:

Under present conditions, anybody may set himself up as a physical culturist. Not only that, he may advise his clients, or whatever he may choose to call them, to pursue a course that must inevitably shorten their lives, and no check at all may be placed upon him.

Any boxer, wrestler, football player, runner, shotputter, etc., who has passed out of competition is privileged to open a gymnasium and tell the world that he is capable of giving fit instruction to all comers, regardless of their present apparent health or their past history. . . .

What may be excellent for the athletes in their prime may be dangerous for the immature boys, and may be absolutely fatal for the middle-aged and elderly, but hundreds, if not thousands, of the "professors" do not know that, and many would not care a hoot if they did, so long as young, middle-aged, and elderly paid their fees promptly.

THE BIG MUSCLE BOYS

Mr. Rice is evidently an astute gentleman; he has noted that the matter of paying the "fees promptly" has a great deal to do with the work of the big muscle boys.

Ah, well! Enough of this! The great outdoors beckons; the golf links, the swimming pool, the baseball diamond, the tennis court, and the cinder path call us. The sand dunes and the woods make their bid for our patronage. What price then these rusty springs, these roller dumb-bells, these rubber bands?

X III

THE ANTIVIVISECTIONIST AND ANIMAL EXPERIMENTATION

"Let us not, I beseech you, sir, deceive ourselves longer."—Patrick Henry.

GEORGE JEAN NATHAN, in that immortal document, "Pistols for Two," in which he and Mons. Mencken, using the cognomen Maj. Owen Hatteras, gave to an unsuspecting world an insight into their personal characters and characteristics, tells us which of his aphorisms delights him most. Of all the soul-searching *mots* perpetrated by this astute coiner of phrases, the one he selected is likewise the one that gives me most joy. "An antivivisectionist," said Dr. Nathan, "is a woman who strains at a guinea pig and swallows a baby." There it is in a nutshell! A Freudian might claim that the term "nutshell" was prominent in my mind because I was discussing the antivivisectionist.

At a period when the whole world begins to turn to science as the real goal of mankind; when intelligent human beings begin to discard pseudosentiment for fact, the followers of what is essentially merely an illogical, fanatical cult continue to oppose progress if it is to involve in any way what they conceive to be abuse of the lower animals for purposes of study. This opposition seems to rest invariably on a lack of actual knowledge of what animal experimentation has accomplished for mankind, of what it has contributed to the life and comfort of the animal, of the extent to which the animal may suffer in the cause of experimentation, and

of the very rules which the scientists themselves have elaborated to safeguard their work with animals.

It is impossible in the scope of a brief article even to enumerate all that has been learned by animal experimentation. Without the aid of this method Pasteur could not have founded the science of bacteriology; such diseases as hydrophobia, tuberculosis, yellow fever, plague, scarlet fever, diphtheria, and diabetes would not have passed under the control of scientific medicine but would have continued to take their immense toll of life and to cause immeasurable economic loss through illness. Indeed, to calculate the sums saved and earned through preventing illness, through opening up countries constantly menaced by disease, through the building of the Panama Canal, and through the saving of workers in industry would produce a figure so vast as to be almost incredible.

BIOLOGIC ASSAY

In the course of the great campaign for the use of experiments on animals to control human diseases, little attention has been given in general to the great problems of what scientists know as biologic assay. Almost everyone realizes the part played by animal experimentation in the provision of information relative to the functions of living bodies. Experiments made on animals have helped scientists to know how the heart is controlled by the nervous system, how the blood pressure is maintained, and how the nerves send forth stimuli and bring back sensation. These facts once learned, it is not necessary to repeat the experiments on innumerable animals, and scientists do not engage in wanton dissections for such purposes.

Equally important, however, from the point of view of the human being, is the constant use of experimental animals to determine the potency of drug preparations, to test the value of vaccines and serums, and to establish the safety of other life-giving substances used for the control of disease in the human body. All these things are involved in the process known as standardization; thus, exceedingly important

remedies for diseases of the heart known as digitalis, strophanthus, and squill must be standardized by methods known as the frog, cat, and guinea pig methods, in which definite doses of the drug preparations are injected into such animals.

The substance known as pituitary extract, which has saved millions of hours of suffering for women in childbirth, must be tested on the organs of guinea pigs or cats before its powers to produce certain definite effects are definitely known. Insulin, the substance used to aid the diabetic in the digestion of sugar, is standardized by use in rats and rabbits. Salvarsan and similar drugs used in the control of syphilis and African sleeping sickness must be tested on mice and rats before it can be distributed for the control of these diseases in human beings. Even ergot, known for centuries to have value in aiding the control of hemorrhage after the birth of a child, is now thoroughly tested as to its various and possibly poisonous qualities on animals before it is sold for use on human beings.

The preparation of diphtheria toxin and antitoxin could not be carried on without the use of the rabbit; the use of smallpox vaccine is dependent on the use of the calf and the pig, and, indeed, every preparation made to combat infections by germs must be standardized in some manner on living tissue before the physician could consider for a moment the use of such a preparation on a human being.

Shall the poisonous doses of potent drugs be learned by tests made on the white rat or the guinea pig or on man; or worse still, shall we permit men to die or suffer mutilation to spare the feelings of the white mouse? Isn't it after all a question of sparing the hyperesthetic sensibilities of some idle woman rather than the duller sensibilities of some lower animal? One by one the infectious diseases that attack man are being brought under control. There still remain those incurable diseases such as cancer, those conditions such as Bright's disease, high blood pressure, heart disease and diabetes, which may be alleviated but have not been completely conquered. Shall the methods that have brought success in the control of some diseases be discarded at the whim of

ANTIVIVISECTIONIST AND ANIMAL EXPERIMENTATION

misguided and unreasoning followers of this cult opposed to human progress?

The warfare between man and disease is a never-ending conflict. The triumphs of hygiene and sanitation in the past have permitted the building of great cities and the turning of man's inventive genius from a struggle against the elements and Nature to constructive achievements in industry and transportation. If the campaign of the sentimentally minded emotionalist against the use of animals were to succeed with the great legislative bodies of our nation, the progress of civilization would be inhibited to a far greater extent than the average man even begins to realize.

THE VALUE OF SERUMS AND VACCINES

Anyone who has seen a child succumbing to the gradual encroachment of the diphtheria membrane in its throat suddenly respond to the marvelous effects of diphtheria antitoxin will oppose to the utmost any attempt to deprive that child of the remedy. In preparing antitoxin, the horse is required for the production of the serum, and the guinea pig for standardization. I have seen the horses used for such service. Their paths are spread in pleasant places. They toil not at all, they are kept clean, they frolic in the open air except when the weather may be inclement. They are well fed and given the best of attention. I have seen the serum withdrawn and seen the horse make no more visible sign of protest than is made by the average man when he sticks his finger on a pin in the back of his wife's dress. I have seen guinea pigs by the thousands utilized for this work. If I am any judge of guinea pig emotions they do not suffer unduly in the process. I have never seen a guinea pig suffer as much as a hysterical antivivisectionist suffers at a dog and pony show or a circus.

Before the discovery of the serum for epidemic meningitis, from fifty to seventy-five per cent of all who were afflicted died. When the serum is given the mortality is below twenty-five per cent of those affected, and this says nothing of the saving in illness and in permanently disabling after effects.

FADS AND QUACKERY IN HEALING

In the investigation which led to this discovery rabbits, guinea pigs, horses, and monkeys were employed. In a war, nations sacrifice the lives of hundreds of thousands of their finest young men; the people are told that the sacrifice is made so that women and children may have a safe place in which to live. Shall the lives of rabbits and guinea pigs be weighed against the lives of the same children threatened by far greater dangers than those of war: the dangers of infectious disease? Puerperal infection which killed the woman in childbirth was controlled through animal experimentation. What about saving women from that menace?

THE SCIENTIFIC STUDY OF DRUGS

It is not alone the so-called biological remedies such as antitoxins, vaccines, and serums that are dependent on animal experimentation. Most of the potent drug remedies used today for the alleviation and cure of disease must be tested and standardized by the use of animals. Most of our important synthetic drugs were first evolved only by the use of animals. The anesthetics such as ether, chloroform, ethylene, and nitrous oxides have the same effects on animals that they have on man. Was it not right that they should be tested first on animals? Such drugs as digitalis which makes the lives of many persons suffering from heart disease endurable, have to be standardized by animal tests.

Of course, animal experimentation never will be discarded. After all, the progress of scientific medicine is a powerful movement sweeping on and on with ever increasing impetus. The "fly on the chariot wheel" cannot halt it; but there is danger that the swarm of flies may impede its movement.

ANIMAL EXPERIMENTATION BENEFITS ANIMALS

Strangely enough, the lower animals have benefited as much as has man himself through the progress made by animal experimentation. Hog cholera serum, the tuberculin test for cattle, the control of hoof and mouth disease, puerperal sepsis in cattle, hydrophobia, fowl plague, and the many

ANTIVIVISECTIONIST AND ANIMAL EXPERIMENTATION

worm diseases that afflict animals depend for their control on the same type of experimentation that yielded results for the diseases of man.

There is another side of the question that has its humorous aspects. It is necessary to kill hundreds of thousands of stray dogs and cats in our large cities to keep them from overrunning the human inhabitants. It has been estimated that a single pair of rats, if permitted to breed unchecked might produce within three years a number of progeny running into eighteen or twenty-four figures. Everyone knows about the prolificity of guinea pigs and rabbits which multiply inordinately. Who shall say that the uses of science are not as kind a fate, as satisfactory an existence, as is the hunting down of the surplus by the hunter, the trapper, the poisoner, or the poundmaster? As we have shown, the horse used for the production of serum has a far happier life than the drawer of burdens in the ownership of some unthinking careless human being.

THE HISTORY OF ANTIVIVISECTION

It is hard for a person with a logical mind to see why this argument should be necessary. The average sensible American business man or farmer is likely to feel that we are agitating a cause in which the side of reason is so obvious that its elucidation is wasted effort. But there is a reason! Scientific experimentation on animals began to attract public notice about 1875, when the accomplishments of research into the normal functions of the human body had already yielded notable results. In Great Britain agitation resulted in the appointment of a Royal Commission which made an investigation and recommended that the work be continued under suitable control.

Since that date efforts have been made by little groups of illogical thinkers to secure legislation both in Great Britain and in almost every state in our own country to inhibit or to prevent completely experiments involving the use of animals. In 1896 a great crowd of ladies and lawyers appeared before the Committee of the Massachusetts Legislature.

Pamphlets were issued, leaflets were circulated, speakers vociferated abusively, mendaciously, and piteously year after year. Worst of all, a few shortsighted possessors of great wealth, animated by no one knows what reasons, left funds in perpetuity for the uses of promotion of such organizations. Where there are funds, there are jobs for secretaries whose duty it is to promote regardless of the advances of progress. Year by year the same little lobbies pop up before the legislators. The same windy breed of legislators—the sob sisters of the legislative halls—produce the same bills and defend them with floods of crocodile tears. The same cohorts of university presidents, professors, physicians, and representatives of industries vitally affected must be mobilized to present the facts in order to overcome this deluge of misguided sentiment. Year after year each legislator receives in his mail, if he is an American, a periodical called *Our Dumb Animals*, and if he is a Britisher, one called *The Abolitionist*. And the rationally minded sober citizen looks on aghast and murmurs, "How long, O Lord, how long!"

The antivivisectionist is likely to attack the scientist who uses animals in his experiments on the ground that the latter is obsessed by sadistic impulses and that he takes a peculiar physical and psychologic delight in cruelty to animals. Of course, nothing could be further from the truth. There have always been lovers of animals among scientists; indeed, many have devoted much of their time to the protection of the interests of animals. There are, moreover, among them men and women whose whole lives are devoted to the protection of the weak and of the unfortunate. Among the terms used by the antivivisectionist are such words as "master demon," "archfiend," "human monster," "human devil," "devil incarnate," and "fiend incarnate." Moreover, the places of research have been called "scientific hells," "temples of torment," and "halls of agony," and the work characterized as "scientific assassination," "torture of the innocent," "the black art of vivisection," and "the orgy of cruelty." From such terms, one may realize the attitude of mind with which the antivivisectionist approaches his investi-

ANTIVIVISECTIONIST AND ANIMAL EXPERIMENTATION

gation into the scientific aspects of this subject. Indeed, it is more reasonable to say that the character of the antivivisectionist is intemperate and biased, and that his propaganda leads him into frenzy, than it is to believe that the scientist, who works with a logical series of experiments that will lead to the cure of human disease, does so animated by fanatic or orgiastic motives.

OLD DOCTOR HADWEN

One finds among the propagandists against animal experimentation the type of character that partakes of the ecstasy and the almost evangelistic enthusiasm that one sees in the leaders of cults of any type. In 1924, one Doctor Hadwen of England toured the United States for the promotion of the interests of this peculiar group. His lectures overflowed with unbridled exaggeration; he used all of the oratorical tricks and showmanship that evangelists have made familiar to us. On returning to England, however, he was called to treat a child dying of diphtheria and with the characteristic blind cruelty of the antivivisectionist, he overlooked all of the experimental evidence that establishes the diphtheria bacillus as the cause of this disease, and all of the evidences that prove that diphtheria antitoxin will cure it. The child was permitted to die under the gentle ministrations of this misguided enthusiast. True, Hadwen was acquitted by the British court, because those who are licensed to practice medicine are permitted by the law to use such knowledge as they possess and such individual methods as their peculiar school of teaching may cause them to believe are satisfactory. The burden is thus put upon the layman in the selection of his physician, and the parent who called Doctor Hadwen had no recourse. When delusions persist to such lengths, is it not time that an intelligent government concern itself seriously with the matter?

ANIMAL EXPERIMENTATION AND EXECUTIVE SECRETARIES

The misguided notions of persons of great wealth who have bequeathed vast sums of money to promote opposition

to animal experimentation have stimulated new activity by those whose occupations demand that they urge this cause on legislators and on the public. The sudden awakening of these agitators after a long period of comparative quiet is, no doubt, due to the fuel added to their resources by these new bequests. A human being, about to pass into the Beyond, is an easy subject to sentimental appeals by fanatical and unreasoning opponents of scientific medicine.

Not long ago, Mr. H. L. Mencken wrote an exposé of the life and work of the executive secretaries employed by these bodies—sometimes themselves the originators and directors of organizations which seem to be established principally to give the executive secretary a job. In a hearing recently held before the United States Senate Committee charged with legislation on this subject, evidence was brought forth indicating that one of the organizations now opposing animal experimentation is definitely of this character.

An indication of the way in which these antisocial propagandists attempt to discredit scientific medicine is a questionnaire circulated to the physicians of this country by a so-called National Antivivisection Society. The questions in this inquiry were so phrased as to permit easy misuse of the answers by the group issuing the questionnaire. The very premises on which the whole argument was based were such that mere acquiescence to the premises committed a physician to opposition to animal experimentation. Moreover, physicians were asked to guarantee that all biologic methods, such as the use of diphtheria toxin-antitoxin and toxoid, and the use of vaccination against smallpox and other diseases would be absolutely free from harm in every case. Because of the physiology of the human being and because of his body chemistry, and because no two human beings are exactly alike in their constitution and in their structure, it is impossible to guarantee anything in relation to the human body. It is possible to show that more than a million children have been given toxin-antitoxin in New York City without a single harmful result. It is possible to show that many millions of persons have been vaccinated against small-

ANTIVIVISECTIONIST AND ANIMAL EXPERIMENTATION

pox with vast benefit to the control of this disease, and with rare instances of harm through secondary infection. It is possible to prove absolutely that the world has been made safer and more healthful not only for human beings but also for the animals themselves through the use of animal experimentation. However, the antivivisectionist does not care for such evidence. He seeks only the rare accident that will make it possible for him to interfere with the progress of science and to extract still more shekels from the sentimentally minded patrons who support him.

Students of the propaganda put forth by the antivivisectionists, the antivaccinationists, and all those who oppose modern science are able to produce incident after incident in which scientific literature has been misquoted, partially quoted or misinterpreted to promote the antis' cause. It is the pride of the medical profession that it invariably cleans its own house. It is the pride of science that it publishes facts in order that investigators and practitioners may have accurate judgment as to the value of any procedure. It is the habit of propagandists for antiscientific organizations, however, to pervert statistics, to eliminate statements unfavorable to their cause, and even to misquote when that seems desirable for the ends they seek.

For more than a quarter of a century, leading educators and statesmen have recognized the value of animal experimentation for the good of all living beings and have despaired because so many human beings seem to be swayed by false propaganda. Year after year, physicians, chemists, biologists, sociologists, economists, and statesmen have had to give freely of their time and their funds in order to meet the attacks of these propagandists before legislative bodies. If the sums necessary for this defense of science could have been applied still further to the saving of life, who knows what vast good might not have been accomplished.

HOW SCIENCE ITSELF CONTROLS EXPERIMENTATION

Medical scientists have not waited for government or other supervision to establish control over animal experi-

mentation that will make it as nearly perfect as possible in preventing unnecessary pain and in providing animals with the best of care. A committee of the American Medical Association regularly functions for no other purpose. Under the control of this committee each laboratory binds itself to observe the rules laid down and to post those rules regularly in each department. The rules require the animals be held at least as long as they are held at the city pound; that they receive every consideration for their bodily comfort; that no operations be made, except with the sanction of the director of the laboratory; that animals be anesthetized and rendered incapable of receiving pain in all operations, except in those in which anesthesia would defeat the object of the experiment, and finally that animals be killed painlessly at the conclusion of the experiment. These rules are most rigidly enforced and laboratories throughout the country are open to inspection by anyone interested from a scientific point of view, or from the point of view of control of this work.

If it be true, as has been said again and again, that science is the hope of the future for the progress of humanity, those who obstruct this progress by needless and unwarranted follies should be considered as subjects for mental investigation, or else as misguided sentimentalists whom one condones, but whom one does not take too seriously.

FADS IN HEALTH LEGISLATION

"The life of the law has not been logic; it has been experience. The felt necessities of the time; the prevalent moral and political theories; institutions of public policy, even the prejudices which judges share with their fellow men, have had a good deal more to do than the syllogism in determining the rule by which men should be governed."—Justice Oliver Wendell Holmes: "The Common Law."

"It is absurd that the administration of a modern State should be left to men ignorant of science and of its human consequences."

—Frederick Soddy: "Science and Life."

Not long ago a group of physicians was returning from a medical convention. They were seated in the smoking compartment of the Pullman, discussing the newest restrictions which a beneficent democracy had decided to place on the practice of medicine, and time passed so rapidly that they failed to take notice of the fact that they were rapidly nearing their destination. The porter, whose vision of fifty-cent tips was fading, finally mustered up the courage to make a direct attack. He tapped one of the gossiping medicos on the shoulder and inquired: "Brush you off, sah?"

"No, indeed," said the doctor, unwilling to be disturbed, "I don't want to fill all this air with bacteria."

"Don't be afraid, sah," said the porter, "the brushin' that I do ain' gwine disturb no bacteria none."

In 1920 the Board of Health of Florida established the following regulation, among others, for the conduct of common carriers:

The brushing of passengers' clothing in the body of the car in transit is prohibited.

Between the porter's skepticism and the fears of the author of that ordinance what a wide range of opinion! But how much of our health legislation is actually as ineffective as the porter's brush? In no field of human activity do the laws present such a bewildering maze of fact and fallacy, of the unenforceable and the unobeyable, as in that of public health. In many instances they seem to represent the transient enthusiasms of the day translated into the rigid legislation of a generation; in other cases, they ramble limpingly along miles behind the science with whose progress they pretend to keep pace.

Far back in the last century an epidemic of cholera broke upon the world, and with no knowledge of bacteriology the authorities of the time were confronted with a demand for protection by a panic-stricken public. On August 16, 1832, the Board of Health of Washington issued the following pronunciamento:

The Board of Health, after mature deliberations, have Resolved, and they do now declare, that the following articles are, in their opinion, highly prejudicial to health at the present season. Believing them, therefore, in the light of nuisances, they hereby direct that the sale of them, or their introduction within the limits of this city, be prohibited from and after the 22nd instant, for the space of ninety days:

Cabbage, green corn, cucumbers, peas, beans, parsnips, carrots, egg plants, cimblings or squashes, pumpkins, turnips, watermelons, cantaloupes, muskmelons, apples, pears, peaches, plums, damsons, cherries, apricots, pineapples, oranges, lemons, limes, cocoanuts, ice-creams, fish, crabs, oysters, clams, lobsters, and crawfish.

The following articles the Board have not considered it necessary to prohibit the sale of, but even these they would admonish the community to be moderate in using:

Potatoes, beets, tomatoes and onions.

Having thus cut off entirely the supply of fresh vegetables, with the exception of four on which they cast discredit, the board recommended that all theatrical perform-

FADS IN HEALTH LEGISLATION

ances or other exhibitions which might be calculated to bring together large collections of persons be suspended for ninety days, and then followed with a still more remarkable resolution:

Resolved, That it is the opinion of the Board of Health of this city that quarantine regulations interdicting the commercial intercourse of our country are wholly ineffectual in preventing the introduction and spread of Asiatic cholera, as well as vexatious and embarrassing to the community, and that they are injurious by creating a false confidence in such provisions, to the neglect of the more important preservatives from the disease. The Board, therefore, earnestly desires that the city authorities will not enact any prohibitory regulations upon this subject.

So early entered the commercial considerations with which health regulations are still so frequently at war! In this day, when we know that cholera is caused by a definite bacterial organism, first described by Robert Koch in 1883; when we know that it is spread like typhoid, through contact with a patient, or through contamination of milk or water by his excreta; when we know that it can be and has been kept out by an adequate system of quarantine, the resolutions of the Washington Board seem asinine and ridiculous. Our knowledge of infectious disease has developed more in the past forty years than in all the previous centuries. Our sanitary authorities no longer work in the dark; they are able to recommend safe and sound legislation for the control of disease. But only too often, alas, legislators contrive to yield to expediency, to fanatical enthusiasm, or to the unweighed superficial evidence of the hour. The results are always ludicrous and sometimes they are disastrous.

MODERN MISTAKES OF THE LEGISLATORS

The United States Public Health Service, at definite intervals, compiles in handy volumes the State laws and regulations pertaining to the public health. It would be impossible, in the scope of this article, to present a detailed analysis of all of these laws. I shall, therefore, select a few at

random, choosing those which demonstrate how little the legislative mind has changed during a century.

In 1916, the State of Colorado passed a measure regarding the hygienic arrangements of places in which food is prepared, manufactured, or distributed. Among other clauses appeared the following:

Cuspidors for the use of operatives, employees, clerks, or other persons shall be provided whenever necessary, and each cuspidor shall be thoroughly emptied and washed out daily with a disinfectant solution.

Thus, Colorado, the mecca of the tuberculous, instead of attempting to educate its public to the menace of expectorating where food is lying about, promotes the habit by supplying facilities for it! What, indeed, is the presence of the spittoon but a psychological encouragement to spitting?

That gaudy institution, the American barbershop, in which Babbitt receives elegantly the simultaneous ministrations of barber, manicurist, and bootblack, is naturally subject to numerous abuses from the health point of view. Dermatologists have conferred the name of barber's itch on a form of infection often acquired there, and no doubt many a seeker of cosmetic embellishment has fetched away other and even worse blessings. These facts have become known, it appears, to legislators, and the result is a weird assemblage of regulations governing tonsorial activities, most of them utterly inadequate to prevent the dangers at which they are aimed, and all quite unenforceable without tremendous staffs of special barbershop hounds. Consider the following from the Colorado code:

Soaps, bay rums, face lotions, hair tonics, and other toilet articles and all solutions must be pure and unadulterated.

Let anyone explain what that means—and if it means what he probably thinks it means, how is it to be enforced? The State of Colorado also believes that its barbers should be physically above reproach. It therefore disregards a half-

FADS IN HEALTH LEGISLATION

dozen obvious facts that make the enforcement of the law impossible and salves its conscience with the following:

Any barber who is affected with open tuberculosis, venereal or other communicable disease must not practice the barber trade. Habitual drunkenness or the use of intoxicating liquor during business hours is strictly forbidden.

Strange that Colorado should thus by insinuation attack the sobriety of one of the most erudite professions practiced in our midst!

Alabama answers the roll call with a sanitary regulation concerning soda fountains:

No patron or customer shall be supplied with a spoon for consumption of a drink or a confection except it has been sterilized since last used, or has never been used.

Sterilization requires equipment which the soda fountains of Alabama certainly do not provide. Where, indeed, is the evidence that disease is carried by spoons that have been washed in running water? And how is the spoon, once sterilized, to reach the customer in a still sterile condition? Moreover, who knows how many bacteria may reside on a spoon that has never been used?

Arizona provides a law regulating midwives with this provision:

A midwife must endeavor to secure the assistance of a physician if the child is not born after twenty-four hours of labor.

It would be interesting to know what scientific opinion aided the lawmakers in determining that twenty-four hours should be the limit of difficulty. Why not twelve or eighteen? And if twenty-four is safe, why not thirty-six?

Florida is particularly concerned with sanitary requirements affecting common carriers. In common with many other states, it forbids the provision of comb and brush in Pullman cars, and so the passenger is compelled to tip the porter a quarter for producing a bootleg comb from the re-

ceptacle in which he has conveniently concealed it. It also requires the cleaning of telephone earpieces and mouth-pieces with soap and water at least once a week, although there is not the slightest scientific evidence that disease has ever been transmitted by these appliances; indeed, experiments recently conducted under government supervision in England show that the likelihood of infection from such sources is infinitesimally small.

Following the last great epidemic of influenza Illinois and many other States adopted elaborate laws for the control of that disease. The Illinois regulations involve notification, placarding, quarantine, and terminal disinfection. On November 3, 1918, the State of Washington issued a regulation requiring every person to wear a gauze mask of a specified character when in public during the duration of an epidemic of influenza, and other States have laws requiring the use of gauze masks by those in contact with a patient. All of these regulations are subject to criticism on the ground that the manner of spreading the disease is not definitely known and that there is no sharp dividing line between what is commonly called a severe cold during nonepidemic periods and what is called a light attack of influenza during epidemic periods. It is known that the infecting substance of epidemic influenza is carried in the nose and throat, and so precautions should be observed during epidemics by those in contact with infected persons, but any regulation requiring notification and placarding for influenza during nonepidemic periods is quite unwarranted in theory, and is certainly never observed in practice.

Next to the common carrier the hotel and the restaurant are the chief prey of the legislator interested in hygiene. North Dakota has a hotel inspection act that covers carefully almost every imaginable sanitary contingency. Many years ago an elongated Texan entered a Texas hostelry and engaged sleeping accommodations for the night. The Texan was six feet eight inches in height and he retired to a bed in which the sheet was only six feet long. When he drew it up to his head his feet were uncovered and when he cov-

ered his feet his neck was unprotected. The result of his harrowing experience was the famous, and perhaps legendary, Texas bed sheet law which ordained that every hotel must provide sheets long enough to tuck under the mattress at either end. But North Dakota's law is not directed so much to the matter of comfort as to that of hygiene. It provides that hotels charging fifty cents a night or more shall always change sheets and pillow slips after a guest departs. Obviously, the guest who pays less than fifty cents a night is likely to be less cleanly and to leave more for the next occupant than is the one who is able to pay more, but no doubt economy as well as hygiene swayed the legislators in their deliberations!

VITAL STATISTICS

From the point of view of vital statistics no law is so important as that requiring the registration of births. The United States has been particularly backward in this respect and there are many States not yet in the registration area. Moreover, both physicians and the public are frequently lax in carrying out the duties imposed upon them by law. Furthermore, while legislators are quite willing to pass all sorts of statutes for the benefit of the public health they usually hesitate to provide the necessary funds for administering the acts that are passed. The result is sometimes ludicrous. But it is a question if folly in this department has ever attained elsewhere the heights revealed in a circular issued by the State Registrar of Virginia on March 20, 1921. I quote in part:

Senate Bill No. 219, to preserve racial integrity, passed the House March 8, 1924, and is now a law of this State.

This bill aims at correcting a condition which only the more thoughtful people of Virginia know the experience of.

It is estimated that there are in the State from 10,000 to 20,000, possibly more, near-white people, who are known to possess an intermixture of colored blood, in some cases to a slight extent, it is true, but still enough to prevent them from being white.

In the past it has been possible for these people to declare themselves white or even to have the Court so declare them. Then they have demanded the admittance of their children into the white schools, and in not a few cases have intermarried with white people.

In many counties they exist as distinct colonies holding themselves aloof from Negroes, but not being admitted by the white people as of their race.

In any large gathering or school of colored people, especially in the cities, many will be observed who are scarcely distinguishable as colored.

These persons, however, are not white in reality, nor by the new definition of this law, that a white person is one with no trace of the blood of another race, except that a person with one-sixteenth of the American Indian, if there is no other race mixture, may be classed as white.

Their children are likely to revert to the distinctly Negro type even when all apparent evidence of mixture has disappeared. . . .

Our Bureau has kept a watchful eye upon the situation, and has guarded the welfare of the State as far as possible with inadequate law and power. The condition has gone on, however, and is rapidly increasing in importance.

Unless radical measures are used to prevent it, Virginia and other parts of the nation must surely in time go the way of all other countries in which people of two or more races have lived in close contact. With the exception of the Hebrew race, complete intermixture or amalgamation has been the inevitable result.

To succeed, the intermarriage of the white race with mixed stock must be made impossible. But that is not sufficient. Public sentiment must be so aroused that intermixture out of wedlock will cease.

The public must be led to look with scorn and contempt upon the man who will degrade himself, and do harm to society, by such abhorrent deeds.

The registrar obviously recognizes the frequency in the South of amourettes between white men and Negro girls and apparently plans to prevent more of them by arousing public opinion. He recognizes also that at least 20,000 per-

sons in the State have Negro elements in their white blood and that on occasion the result of a marriage between two such ostensibly white persons may be a somewhat dusky progeny. What he does not know, and what no one else knows for that matter, is any certain method of determining when Negro blood is present in a person, or how to determine just when the prospective infant of such a person will show it. Nevertheless, he is bold in attacking the problem, perhaps because his solution offers a means of providing funds for extending the work of his department. Here is his solution:

The task of the Bureau of Vital Statistics is a great one, with not a cent of appropriation to accomplish it with.

There is a plan, however, by which it may be financed if the public will lend its aid.

Thousands have applied for the registration of births that occurred before June 14, 1921, the date when the old law went into effect.

The new law further provides for the registration of all persons who desire it, and who will make application for such registration of color and birth, remitting at the same time the fee of twenty-five cents for each applicant. Do not send stamps. The births will be permanently recorded and preserved for all time and will be of great value for many purposes, such as to prove American citizenship when applying for passports to go abroad, and for establishing and preserving the family tree for future generations.

We will even admit for registration persons living in Virginia but born elsewhere. A family may complete its family tree by recording deceased ancestors or relatives. Each person will thus obtain full value received for the small fee. Virginians now living elsewhere may also register.

If ten or twenty thousand or more will register within the next few weeks, we will be able to provide printed forms, filing cases, desks, typewriters, postage and clerk hire, to begin a vigorous State-wide educational propaganda.

As has been said, there is no known method by which the admixture of Negro blood with white in the human being may be certainly detected. It thus becomes possible for any

FADS AND QUACKERY IN HEALING

person in the State of Virginia to obtain from the State Registrar, for the small sum of twenty-five cents, a card certifying that he is white! Certainly, if the funds at the disposal of the Registrar are as limited as he himself admits, he will have little opportunity to verify the statements made on the applications sent to him. And even if the matter came to a formal test, science would be quite unable to aid him in detecting the presence of a Negro strain that was not obvious to the naked eye.

REGULATING THE PRACTICE OF MEDICINE

With our forty-eight States and the District of Columbia we have an equal number of laws regulating the practice of medicine. They are practically without uniformity, and in many states there are four or five discordant laws covering the various new cults. Following is an excerpt from an act passed by the legislature of Connecticut—a State famous for lately licensing almost a hundred men with stolen, purchased, or otherwise misgotten medical diplomas. This law is entitled "An Act Concerning the Practice of Natureopathy":

For the purpose of this act, the practice of natureopathy shall be held to mean the practice of the psychological, mechanical and material sciences, as follows: The psychological sciences such as psychotherapy; the mechanical sciences, such as mechanotherapy, articular manipulation, massage, corrective and orthopedic gymnastics, neurotherapy, physiotherapy, hydrotherapy, electrotherapy, thermotherapy, phototherapy, chromotherapy, vibrotherapy, concussion, pneumatherapy and zonotherapy; and the material sciences, such as dietetics, histotherapy and external applications; but shall not be held to mean internal medication.

Here is legal power inflicting on the people of the State all the fantastic forms of assault upon the exterior of the ailing human that have been devised by the paranoiac brains of a hundred cultist prophets! By the act the State gives legal recognition to the disciples of the late—but not too late—Albert Abrams, who was responsible for vibration

therapy and for concussion; of Fitzgerald, who evolved zonotherapy, with its tenet that squeezing the big toe will cure a pain in a tooth; of Col. Dinshah Ghadali and his spectrochrome-therapy; of George Starr White and his biodynamo-chromatictherapy of Still, the osteopath; Palmer, the chiropractor, and heaven knows how many more grotesque evangelists.

Connecticut thus provides amiably for all the cultists; most other States, perhaps a little more wary, provide only for the groups with effective lobbies.

In 1931, attempts were made in Arizona to create a naprapathy board, in Pennsylvania to create a special board consisting of naturopaths, chiropractors, and neuropaths to regulate drugless healing, and in nine other states bills were killed introduced in favor of naturopathy. Utah, however, marred an otherwise perfect record by passing a bill which provided that practitioners of naturopathy might be examined by a committee of naturopaths exclusively instead of by a committee which included physicians. The bills regarding naturopathy in other states are just about as complicated and peculiar as the one which controls the practitioners of this remarkable cult in Connecticut. In practically all states the naturopathic bills propose to authorize the licentiates to use the title "doctor" with their names provided the word *naturopath* follows the name of the healer. In several states where there are basic science laws, attempts have been made to exempt naturopaths. Wyoming in 1931, exempted from its Medical Practice Act all persons who treat human ailments by prayer or spiritual means, and in California—good old California—it was proposed to create a Board of Christian Healing and to regulate the practice of treatment by Christian healing and imposition of hands or annointment with oil, and prayer. There were no educational qualifications for Christian healers.

Bills failed in Massachusetts in favor of magnetic healing, in California in favor of masseurology—whatever that is—in Illinois in favor of naturopathy, in Pennsylvania in favor

of neuropathy, and in Washington in favor of sanipractic, and in Iowa in favor of suggestive therapeutics.

The record for 1931 is typical of the year by year battles in various States fought by the medical profession in behalf of the people to prevent the licensing of ignorant healers to practice their performances on the human body. Iowa, birthplace of chiropractic, permits osteopaths to use the prefix "doctor" if followed by the letters *D. O.*, and chiropractors to use the prefix if followed by the letters *D. C.* Even optometrists can call themselves "doctors" if they put *Opt.* after their names. In America doctors of this kind are almost as profuse as professors.

Quite frequently State legislatures endeavor to regulate the practice of surgery. Wisconsin once tried to cause every doctor to submit removed appendixes to the State Legislature and in Massachusetts in 1931, a bill was introduced to require the consent of a patient before a physician removed any organ of the body and to require the physician to explain to the patient before the operation the necessity for such removal. Moreover, the bill proposed to cause physicians who anticipated some pain from their handling of the patient to explain to the patient first that pain would result and to obtain the patient's permission. Good old American legislators never hesitate to practice law, medicine, dentistry, or any other learned profession or science. A constant battle wages between the medical profession and the Congress of the United States because that Congress invariably embarks on regulation of medical practice. Recent efforts of legislators to break into medical science have resulted in some extraordinary demonstrations. In Mississippi in 1930, a law was enacted providing that no marriage license shall be issued when it appears that the applicants, or either of them, is drunk, insane or an imbecile. It is quite a task for a marriage clerk to determine whether or not any couple anticipating marriage is imbecilic. The New York State Legislature in 1930 passed a bill to license persons, firms, or corporations engaged in procuring people to donate blood.

CONTROLLING DISEASE BY LAW

The control of venereal disease is the despair of public health officers and legislators alike. The statute books of all the States bulge with measures that are hopelessly inefficient to accomplish what they purport to do. Many States and municipalities have laws requiring the reporting of cases of venereal disease by both name and address, by address alone, or with neither name nor address. None of these methods yields anything resembling an adequate index of the true venereal disease rate of the community. Some States also require druggists to record the names of those purchasing remedies believed to be for the treatment of venereal disease, but I have seen nowhere any evidence that such laws are obeyed or that they have accomplished anything. Elsewhere, arrangements are made to quarantine and treat those suffering with venereal disease, particularly the prostitute who is the widest disseminator of these diseases; the first few hours after her release see her again at work, promptly infected again, if not still infectious, and as promptly infecting those who come in contact with her. The truth is that physicians who have watched the progress of venereal disease legislation over many years have become more and more convinced that their eradication is an educational and medical problem, not a legislative one. Eradication will depend on education in prophylaxis and on prompt and successful treatment. Certainly the burden of proof is on the legislators and their advisers that their restrictive and regulatory measures have accomplished anything. The only value of much of the legislation so far enacted lies in its dissemination of educational matter.

All in all, the study of legislation in the field of health and hygiene leads to a simple conclusion, and it is that of Mr. Justice Holmes: "The life of the law has not been logic" and "the prevalent moral and political theories . . . have had a good deal more to do than the syllogism in determining the rule by which men should be governed." Nebraska, Wisconsin, and many other States have laws which forbid

physicians to split fees, and a strong organization of surgeons in this country requires each of its members to take an oath that he will not do so. But only an elementary knowledge of human nature is required to make it plain that the man who wants to split fees will not hesitate to violate a law that is easier to flout than the Volstead Act, or to break an oath of the nature of that required by the surgical organization. How many men, indeed, have ever been penalized for violating that law, and how many have been dropped from the surgical organization for forgetting their oath?

PROTECTION OF MATERNITY AND INFANCY

A typical disregard of logic by legislators appeared in the passage of the Sheppard-Towner Act providing for the "public protection of maternity and infancy." This act was one of those, rather numerous during the Harding administration, which arranged to give a certain amount of money to the individual State out of the national treasury, provided the State would appropriate an equal amount. As might have been expected, the law was heartily endorsed by the conference of State and territorial health officers, which meets annually in Washington. Similar measures were introduced for the development of physical training, for improvements in education, for the treatment of venereal diseases, and for other projects. As soon as any such federal law is passed the proponents of it mobilize at the State legislatures and use it as an inducement to get large State appropriations.

The American Medical Association through *The Journal*, and many other important medical organizations opposed the passage of the Sheppard-Towner Act. It was urged that the care of the mother and the child is a local—even a personal—not a Federal function. It was pointed out that the encroachment of the State upon the personal relations between the patient and his physician was becoming a menace. Compulsory health insurance and State medicine, indeed, are the ultimate and worst forms of paternalism; they hinder

medical progress by inhibiting individual initiative. Let me quote from Dr. Frank Billings, a leader of American medicine, on this point:

There may be rational grounds for this policy in sparsely populated regions of the country which are not provided with a sufficient number of resident physicians to care properly for the sick. With this exception there is no rational basis for this sort of paternalism on the part of the Federal or State government. State medicine is naturally and properly concerned in the matter of public health: air, and water pollution, food contamination and adulteration, the prevention of the spread of communicable diseases, and the like. The State properly may standardize and enforce certain rules of procedure—notification, methods of disinfection, and the like—for the medical practitioner in the management of patients who suffer from communicable diseases; but the treatment must be left with the physician. . . . Experience shows that centralized administration, either federal or State, of activities dealing with the health or with the treatment of the sick and injured is likely to become bureaucratic and occasionally is subject to political debasement.

It is significant that President Coolidge put himself definitely on record as opposed in principle to all laws which involve Federal subsidies to individual States. But the reader who will look up the platforms of both the major political parties during 1920 will find planks in each of them promising definitely to provide maternity-infancy legislation. These planks were inserted by experienced platform builders to attract the growing women's vote. The legislation promised was enacted, all but six States made the individual appropriations required—and yet the maternal death rate has not been appreciably affected.

However, the greatest interest attaches in recent years to legislation which is concerned with Federal subsidies by the government to the States in order to aid prenatal care and maternal welfare and in attempts by the government to enter on the practice of medicine through the provision of complete medical care to veterans and their families. The

progress of the legislation initiated as the Sheppard-Towner legislation has been exceedingly interesting. When the bill was first introduced it provided for operation over a certain period. At the end of that period, a government bureau once having been established with a considerable number of employees, new legislation was agitated to make the experiment an indefinite one. Other legislation proposed to continue the measures for but five years. The new bills finally were organized into what was known as the Jones-Cooper Bill. The functioning of the Sheppard-Towner Act failed to effect any discoverable reduction in maternal and infant mortality rates. No statistics could be obtained which indicated that the operation of this measure had in any way decreased the incidence of deaths of either mothers or babies. No evidence was produced to show that any of the numerous child health conferences appreciably affected the infant or maternal mortality rates. The original Sheppard-Towner Act became a law November 23, 1921. At the end of its service, legislation was passed to continue it for another brief period. On June 30, 1929, however, the act died. During the seven and a half years that it was in effect it cost the people of this country about eleven millions of dollars. During that time it did not apparently develop a single new idea in the field of maternal and infant hygiene, nor did it accelerate the rate of decline in either maternal or infant death rates. Much of the money devoted to the States through the Sheppard-Towner Act was spent on health projects in no way related to the prevention of maternal and infant mortality, but projects which seemed to the State health officers excellent ways in which to spend the Sheppard-Towner money.

The beginning of 1932 finds new legislation proposed for the continuance of these appropriations, now known as the Jones-Bankhead Bill, held incommunicado in a Senate committee. In these days when budgets are difficult to balance and when there is wailing and anxiety over Federal expenditures, Federal subsidies to the States are likely to be seriously curtailed. It would seem that the processes of Nature,

as revealed in national economics, have taken care of what seemed to be an impossible situation from the point of view of governmental control of health activity within the individual states.

THE CARE OF THE VETERAN

Following the World War, our government, like all others, undertook to provide suitably for disability sustained by veterans as a result of their war service. The record of our government in the care of its veterans surpasses in lavishness that of any other nation in the world. At a time when stringent economies in expenditure are necessary this fact must be emphasized. Immediately after the World War, plans were made to provide hospitalization for every veteran who might be suffering from a disability incurred during the war, or a disability that might be remotely related to his war service. Then in 1924 it was revealed that numerous beds in government hospitals were unoccupied. Legislation was introduced to provide also for the hospitalization of veterans with disabilities not of service origin, with the understanding that indigent veterans were to get first choice. The beds available have multiplied enormously. Even now, however, plans are proposed for increasing the number still further, notwithstanding that a survey recently made indicated that more than 200,000 beds in civilian hospitals are unoccupied and that many civilian institutions face ruin for this reason.

The mathematics of the situation is simple. There are at present some fifty-three veterans' hospitals with approximately 26,000 beds. Because of the policy of taking care of veterans for all disabilities regardless of their service origin, the Veterans' Bureau estimates that 130,000 beds will be required. The average cost of construction of a hospital is from \$3,000 to \$3,400 a bed; the mere cost of construction will therefore approximate \$300,000,000. The cost of maintenance will be well over \$200,000,000 a year, not including the cost of maintenance of the staff, which would be approximately \$20,000,000 a year more. What a prospect for a period of financial depression! With these institutions once created

and operating, the government is confronted with two alternatives: It may continue indefinitely to give free medical care, enlarging the group cared for, thereby keeping beds occupied and the Veterans' Bureau intact, or it may look forward ultimately to disbanding the Veterans' Bureau and to scrapping the million dollar institutions it proposes to construct.

The psychology of the situation is again simple. A bureau once established begins to expand, to grow, and to forestall dissolution. The Veterans' Bureau, if it wishes to continue as a thriving and growing organization, naturally will support plans for extending its hospital facilities and its personnel.

There are many reasons why the people of the United States must oppose unreasoning expansion of the Veterans' Bureau and why they should consider alternative plans such as that providing cash benefits to disabled veterans. These reasons are so logical and so inherently sound that they must appeal to every thinking person. The continued building of veterans' hospitals and the enlargement of the Veterans' Bureau constitute an insidious approach to State medicine. The actual needs of veterans will gradually be exceeded by the medical provisions available. Then socialistically and communistically minded demagogues will demand that the State administer care to all individuals, as it has attempted to care for veterans. Such a procedure would strike at the fundamental principles of the democracy under which we live and for which our veterans fought. It would impair greatly the progress of medical science; it would destroy interest in medicine as a career. It would lead to the poor type of medical service given to people under similar systems abroad.

The veteran today must go to a veterans' hospital selected for him by the Veterans' Bureau, even though it is some distance from his home. Thus he is removed from his family to become a ward of the state. Government employees, whose primary allegiance must be to the government which employs them rather than to the veteran who is served, ex-

amine and diagnose his case. Free choice of physician and responsibility to the patient rather than to any other employer is so fundamental in first-rate medical practice that it has been recognized even by governments that are experimenting with state medical care. Government bureaus do not provide for this type of practice.

It has been argued that veterans, permitted to choose their own physicians, will succumb to quackery. The argument is not warranted by the experience of state insurance systems that permit free choice of physicians. Our veterans as a group are certainly as intelligent as the rest of the public. It is unlikely that they will choose quackery any more than the rest of the people choose quackery in times of illness.

American soldiers who fought in Europe and who served in this country were inspired by the ideal of maintaining the great American democracy. Our system of government gives the individual free choice of his method of life; it gives him a voice in selecting his government and the laws by which he will be governed. The present plan of hospitalization for the disabled and the possible extension of this hospitalization to the care of all veterans, to the families of veterans, and, indeed, to other persons in the government service is a threat at the very foundation of our government. It will, no doubt, arouse chortles of joy among socialistic and communistic leaders.

Yes! Mr. Justice Holmes was right: "the institutions of public policy" have a great deal to do with shaping our laws; certainly much more than sound logic or the established facts of science!

THE CULT OF BEAUTY

"Remember that the most beautiful things in the world are the most useless; Peacocks and lilies, for instance."—Ruskin.

"Beauty provoketh thieves sooner than gold."

—Shakespeare, "As You Like It."

IN the classified telephone directory of any large American city one comes casually on the heading Barber Colleges, and proceeds then through Barbers, Baths and Beauty Culture Schools, to Beauty Parlors. Then one advances to Corsets and Accessories, to Cosmeticians and to Dermatologists—and begins to realize at last what a vast trade has grown out of the desires of Mr. Babbitt and his wife and daughters to enhance the physiognomies and figures with which a none too beneficent Providence endowed them. If one resides in a town in which the trade is backward, the promoters of comeliness may still be found under such old-fashioned headings as Hairdressers, but where the cult of beauty has many shrines they hold forth in all the gaudy glory of Beauticians and Cosmetologists. And the barbers are Tonsorialists.

As with classifications, so with names. In all of the cities in which the beauty shops flourish, their sign-boards display an extraordinary similarity. Consider these samples plucked from several lists:

*Annie Laurie Beauty Parlor
Bellcano Beauty College
Bertha Betty Beauty-Spot Shop
Betty Jane Beauty Shoppe
Bonita Beauty Salon*

THE CULT OF BEAUTY

*Fountain-o'-Youth
Hollyd Obesity Salon (The first word is a contraction of Hollywood)
Babe's Beauty Shoppe
Beau Ideal Shoppe
Brush-Up Shop
Brownatone Shop
Char-Ming Beauty Shoppe
Colton's Permanent Wave Shop
The Fairest Marcel Shop
Franco-American Beauty Shop
Gotthart's Vienna Beauty Shop
Hindu Rose Beauty Parlor
Jean's System of Beauty
La-Ann Beauty Shop
La-Blanche Beauty Salon
Ladifair Shop
Maison Gustav
Maison de Sadie
Miladi Beauty Shop
Mi-Lady's Beauty Shop
Mitzi Beauty Shoppe
Paradise Beauty Shop
Madam Pauline
Peacock Beauty Shoppes
Poudre Box Beauty Shoppe
Premier Epilation Salon
Sanitary Beauty Parlor
Venus Beauty Parlor
Your Style Beauty Shop*

Here are parlors, colleges, shops, shoppes and salons, all conjuring with the magic word beauty and conducted by damsels variously yclept, whose names have undergone strange metamorphoses in accordance with the nature of their art. Here are Eva May, Emmie Lou, Frances Jeune, Helen Janice, Kathryn Ann, Beatrix, Elza, Cecile, Cecille, Ethyle Clair, Sadye, Ada Dolores, Estelle, Mae, Gladys, Gloria, Hazelle, Helyn, Hannette, Myrtle, Jean Jonnie, Georgette, Arline, Kathlyn, Adoline, Marjorine, and Neoma.

Proceeding through the telephone book, one reaches the

heading Plastic Surgery, and comes upon the names of five or six médicos who, it seems, devote themselves to the removal of the redundant wrinkle, to restoring the aquiliney of misshaped proboscides, to the disposal of the fat resultant from too many calories, and to the miscellaneous alteration of countenances which, for one reason or another, seem to their possessors to be not what they ought to be. These learned gentry are obviously not to be listed with the ladies above mentioned, except in so far as they are also concerned with the glorification of American womanhood and woman-like manhood. Of their arts and their deceipts more will be said later.

Estimates place the number of beauty shops in Manhattan at between fifteen hundred to two thousand. There are at least a thousand in Los Angeles, not counting Hollywood. The number in Florida for a while increased with every incoming train, for the beauty shop, like the fur store, the jewelry store, the dance hall, and the homes of "ladies of leisure," is among the first to profit when money is loose, profits are large, and the turnover rapid. Of late, the depression or predicament has turned many a damsel to beautification at home. Only the permanent wave continues to flourish. The high potentate of one college for cosmeticians informs me that nine thousand emporiums are devoted exclusively to the sale and application of her wares, and that an average of ten more or less slightly young women dispense beauty and its accessories at each of them. The casual trade in powders, soaps, creams, lotions, beauty masks, nose-shapers, chin-lifters, ear-pressers, hair-restorers, hair-removers, hair-straighteners, and hair-tonics is a matter of millions.

Indeed, it is largely on their sale—they are endowed with names as fanciful as those of the ladies who promote them—that the beauty shop industry has arisen. All the rest of the hocus-pocus—the "colleges" for the training of apprentices, the various mysterious technics and maneuvers, and the trade associations and their carefully planned publicity—are intended mainly to promote the traffic in toilet prepa-

THE CULT OF BEAUTY

rations. If one turns from that section in the telephone book devoted to beauty parlors and hairdressers to that headed Cosmetics or Toilet Preparations, certain names will be found recurring with the significant words "manufacturing company" behind them. The company with the nine thousand dispensaries of cosmetic art manufactures one hundred and thirty-seven preparations. Corresponding to the Beau Ideal Shop we have the Beau Ideal Preparations, to the Boncilla Shops the Boncilla Laboratories, Inc., to the Cara Mia Shops the Cara Mia, Inc., to the Charm of Youth Shops the Charm of Youth Corporation, to the Marinello Shops the Marinello Company. There are Helena Rubinstein and Elizabeth Arden also. And so on through the list, with the independent ladies who conduct individual shops or parlors, perhaps in their own homes, supplied by manufacturers who deal in the various preparations in bulk. The business increases by leaps and bounds, and is acquiring a legal status. Let us cease for a moment these generalizations and gaze upon some concrete facts.

THE LAW AND THE BEAUTY SHOP

Many of our States are already in the fold with State licenses for beauticians, and the way is open in most of the others.

In Illinois one cannot practice beauty culture without a certificate of registration as a beauty culturist. "Any one or any combination of the following practices constitutes the practice of beauty culture when done for cosmetic or beautifying purposes and not for the treatment of disease or of muscular or nervous disorder," says the law. Here, indeed, is a fine distinction, and the specifications go on to convey suggestions titillating to an active imagination. Beauty culture, according to the act, is "the application of cosmetic preparations to the human body by massaging, stroking, kneading, slapping, tapping, stimulating, manipulating, exercising, cleansing, beautifying, or by means of devices, apparatus or appliances, arranging, dressing, marcelling, curling, waving, cleansing, singeing, bleaching, coloring, dyeing,

tinting, or otherwise treating by any means the hair of any person." I have seen a photograph of the governor of this proud State as he signed the law, his cranium, quite devoid of hirsutage, glowing beneath the countenance of an inspired cosmetician, who breathlessly awaits the application to the paper of the tintorial fluid that is to legalize her noble profession. But wait! Another great profession also pleads for protection! "However," says the act, "provisions of this act shall not authorize any registered beauty culturist to cut or clip the hair of any person unless he has first obtained a certificate of registration as a *barber*."

The law specifies who may be a registered apprentice in the art and limits the certificate of cosmetician to those who are at least sixteen years of age, of good moral character and temperate habits, and who have graduated from an eighth-grade elementary school or completed an equivalent course, and finally, who have either studied beauty culture for one year as registered apprentices or graduated from an approved school. Naturally, the legislators provided for admitting into the fold, pronto and without examination, all those who were practicing one year before the law was passed. Also they provided for the revocation of licenses for immorality, habitual drunkenness, gross malpractice, incompetency, continued practice by persons having contagious diseases, drug addiction, and unprofessional conduct.

The Arkansas bill specifically mentions the removal of superfluous hair as a part of the cosmetic therapist's art. The Missouri law speaks of hairdressers, cosmeticians, or cosmetologists as well as of beauty culturists. It also employs the words "cosmetology" and "cosmetological establishment." In its definition of the practices concerned, it mentions particularly the removal of superfluous hair by electricity and speaks of the "limited practice of cosmetology" as the "occupation of manicurists and electrologists." The Missouri law requires the registration of each cosmetological establishment for purposes of sanitary control and bars the use of its rooms at any time for sleeping or residential purposes. It carefully exempts from the law members of the fol-

THE CULT OF BEAUTY

lowing liberal professions: medicine, surgery, dentistry, osteopathy, chiropody and barbering.

In Oregon the law takes another turn; there cosmetic therapy includes "the application of the hands or of mechanical or electric apparatus with or without cosmetic preparations, tonics, lotions, creams or clays, to massage, cleanse, stimulate, manipulate, exercise or otherwise improve or beautify the scalp, face, neck, shoulders, arms or upper part of the body, removing superfluous hair, manicuring the nails of any person, *male or female*, and to arrange, dress, curl, wave, cleanse, cut, singe, bleach, color or similarly treat the hair of any *female*." Here also the new profession has not been permitted to infringe upon the immemorial rights of the barber.

Wisconsin found necessity for definitions of the terms bobbing, beauty parlor, managing cosmetician, operator, itinerant cosmetician, and school of cosmetic art. It carefully exempts chiropodists, masseurs, hospital attendants, nurses and student nurses, physicians, surgeons, and barbers from the operations of the act. It places all cosmetic establishments under the State board of health for examination and inspection. It regulates particularly the use of the electric needle. There must be no treatment of diseases of the skin or scalp except under the direct supervision of a physician. Towels may be used only once and instruments must be sterilized after each employment.

In some of the States the licensing of cosmetic practitioners is controlled by a State board of registration, in some by the board of health, and in some by specially established boards. In New Mexico the board has five members, of whom at least two must be women beauty culturists and two male hairdressers. Nothing is said about the qualifications of the fifth member. Utah mentions specifically as included in the practice of the cosmetician the removing of superfluous hair, warts, or moles by the use of electricity or otherwise.

To those familiar with legislative methods in America it will be clear at once that the passage of such legislation in so many States within a period of little more than a year repre-

sents an organized movement, with the submission of a so-called model bill, modified to meet the idiosyncrasies of the individual States. "These six laws were obtained," says the official organ of the American Cosmeticians' Society, "as a result of much self-sacrifice and hard work on the part of a small group of women in each of these States. They have behind them some fine organization work, personal enthusiasm that could not be damped by setbacks and misunderstandings, meetings without number, countless hours of telephoning, hundreds of personal interviews with legislators, weeks given over to lobbying in the State capitals, days of anxiety and disappointment, and a generous amount of that necessary thing—coöperation."

In Missouri success was not difficult because the local branches of the American Cosmeticians' Society and the National Hairdressers' Association combined forces to push the bill through. But hearken to what happened in Oregon, as told by Miss Mary E. Newman, of the National School of Cosmeticians in Portland:

When newspapers began to ridicule our movement, many of us who carried the most advertising stopped it immediately, and made a personal appeal to the editors. They reconsidered and gave us a splendid write-up.

We hired no lobbyist—we did our own lobbying. We each tried to look our best and be ladylike, not bold or forward, and we were listened to with respect, though at first there was the usual attitude of ridicule.

Our bill passed through Senate and House by a large majority. But not until the governor had signed our bill did we lessen our vigilance.

The report from New Mexico is almost romantic; thus the leading newspaper of Santa Fé:

When the bill regulating the beauty parlor operators was introduced, great hilarity ensued and the bill and all its works were greatly kidded. All that was needed for a laugh the first three weeks of the session was a casual reference to the beauty parlor bill. The earnest and good-natured young ladies who lobbied the bill to a triumphant finish dimpled

THE CULT OF BEAUTY

merrily at all the jokes, issued frequent invitations to luncheons and dinners, talked quietly. When the bill came up for passage it was regarded as seriously as any other measure in the House.

Miss Evelyn Lazarus, a worker in the same sovereign State, contributes this record of her personal experience:

Before our bill was presented I had no less than four conferences with the Barbers' Union here in Albuquerque. I can't remember ever having had to do so much fighting before. The argument waxed so hot about what our line of work included that it got into personalities. Then again politics were played. . . .

Then our real trouble was to start—in the House. Over 50 per cent of the House is Spanish, and you just talk at them, not to them. We presented our case to every man there. Every place and any place we met them they were lobbied. (sic!). A few had their wives with them, which was a great help to us.

Miss Pinson has that go-get-it smile, and however discouraged we were, she smiled—in spite of the mean things that were said to us. . . .

What wonder, then, that the passionate legislators of New Mexico succumbed, and made cosmetology a licensed and learned profession!

SCIENTIFIC PLASTIC SURGERY

Following the experience acquired by our surgeons in the Great War, plastic surgery advanced rapidly. The need for restoring extensive segments of the skin, for rebuilding facial contours destroyed by explosives, and for repairing the ravages of burns by fire or chemicals gave birth to surgical methods with results nothing short of marvelous. Such specialists as the English surgeon Gillies and in our country Vilray P. Blair, J. Eastman Sheehan, and others, have published vast tomes recording the before and after aspects of hundreds of patients. A dissemination of the photographs marked "before" would make most potent propaganda for the pacifists. The "after" illustrations, revealing the accom-

plishments of the surgeons, aided by certain artists in the creation of artificial noses, ears, toupees, and what not, arouse gasps of astonishment and almost of disbelief. However great the skepticism of the reader may be, the facts are nevertheless as depicted by Mr. Gillies.

A few regularly licensed medical men in some of our large cities have built up tremendous practices in such reconstructive surgery. Merely as an estimate, I should guess that there are today perhaps ten reputable surgeons in the United States who do any considerable amount of this work. In addition, each of our large cities maintains from one to ten practitioners, all regularly licensed but beyond the best repute and wavering on the shadowy borderland of quackery, who likewise limit their practices to facial and body reconstruction. Finally, a considerable number of so-called general surgeons, of surgeons limiting their practice to the ear, nose, and throat, and of physicians specializing in diseases of the skin, undertake such procedures on occasion.

THE BEAUTY QUACK

It is not within the purview of this article to define the marks of the charlatan in plastic surgery. Gradually those marks are becoming apparent even to credulous *Homo Americanus*. Some of the "specialists" advertise openly in the newspapers, giving a list of the operations which they wish to undertake. An example follows:

AMERICA'S LEADING
FACE SPECIALIST
AN ETHICAL SURGEON
REGISTERED AND LICENSED
OVER 22 YEARS IN
CHICAGO, ILL.

Many people do not realize that their facial appearance has so much to do with their success in business and society. It is true, your personality has much to do with your popularity, but even with a charming personality the entire effect is spoiled if you are embarrassed by a deformed nose of any

THE CULT OF BEAUTY

kind. Sagging Cheeks—Nose to Mouth Lines, Ruffly-Wrinkly Skin over and under the Eyes—Scars—Outstanding Ears—too large or too small a mouth, a loose, flabby neck or any other deformity or blemish. For 22 years Dr. — has been a Licensed Surgeon in Chicago, Ill. His knowledge gained from many years of study and his vast experience places him in a position to give you the soundest and most valuable advice just what can be done in your particular case.

The corrections are done without loss of time from business or social affairs. No bandages are used and all the work is painless. Phone for appointment. Privacy is assured you at all times; separate entrance and exit.

The appeal to secrecy is one of the mainstays of the trade. The successful results are broadcast by the patient himself and by the charlatan through the press and through his advertising literature, but the patient who has had an unsuccessful result is likely, if he lives, to hide his chagrin in silence. Occasionally, when the results are especially serious, they come to light through the medium of the courts. From several hundreds of instances that are available I select a few:

Los Angeles, Cal.—Suit for \$500,000 has been filed here against Drs. — and —, plastic surgeons, by Mrs. —. In Her complaint, Mrs. — states the defendants attempted to remove superfluous flesh from her ankles, but that it finally became necessary to amputate both legs.

Chicago.—Dr. —, plastic surgeon, . . . today is defendant in a damage suit for \$7,000 . . . In her bill Mrs. — states that as a result of facial treatments a year ago her face was badly scarred and her eyes so badly crossed she was obliged to have them straightened by another surgeon “at great cost and suffering to herself.”

Chicago.—Dr. — is the defendant in a suit for \$50,000, filed in the Superior Court yesterday . . . The bill charges that on July 17, Dr. — performed an operation to straighten —’s eyes. As a result of carelessness and unsanitary conditions under which the operation was performed, according to the bill, —’s eyes became infected and it was later necessary for another surgeon to remove one of them.

A dignified, handsomely dressed woman walked into my office in Chicago in September, 1926. When she removed her hat and her veil her face revealed the wreckage of an encounter with one of the most widely advertised plastic surgeons in America. She had come to him only after Gillies, some French surgeons, and several in New York had told her to avoid plastic surgery. But when she was a girl she had been operated on for removal of some glands in the neck, and she considered the scar unsightly when she wore an evening gown.

The Chicago surgeon consented to remove the scar from the neck, inveigled the lady into a face-peeling operation, and undertook to do his surgery in his office under a local anesthetic. The results were pitiful. The caustic acid used in the face peeling had produced scarring worse than the original condition. The original scar had been operated on twice and, as sometimes occurs in such cases, the new scars were far worse than the old. Portions of the eyebrows had been removed and the contraction of the scar had left an extremely distorted appearance. Because of the prominence of her social position the woman could not go into court to seek financial reparations for the injury done to her body.

One plastic surgeon who is reputed to be most successful—only, however, from the point of view of the size of his income—has for several years employed a publicity representative who is charged with the duties of securing patients of note, particularly in the theatrical profession, with the wide dissemination of news of successful results, with the suppression of newspaper statements about unsuccessful results, and with the promotion of publicity concerning unsuccessful surgery by and damage suits against competitors.

In many instances the records of these plastic surgeons are befogged by doubts as to whether or not they have ever had medical or surgical training sufficient to qualify them for undertaking the most simple of operations. Indeed, it is not clear in some cases that they have even graduated from reputable medical schools or obtained their licensure by proper examination. The aspirant for facial reconstruction

will do well to inquire carefully into these matters before submitting himself to the scalpel.

The competent performer of plastic surgery gets his results by the transplantation of flaps of tissue from one portion of the body to another. The manipulation is delicate, usually demanding the retention of the original blood supply of the part until a new blood supply develops at the spot to which the transfer is made. Obviously, here is a procedure to be carried out only in a good hospital and under the most aseptic conditions. The growth of such tissue may require weeks or months. Sometimes a portion of cartilage is transferred also, say to build up the sunken bridge of a nose that gives the face a dished appearance. The procedure of the charlatan is to fill a syringe with melted paraffin and to inject this beneath the skin to fill out the cavity. The paraffin hardens and the patient is satisfied. But experience has shown that paraffin has the peculiar quality of stimulating the growth of the tissue cells, and numerous cases are now on record of the development of disfiguring tumors and even of cancers after its injection.

On a hot day in July in 1924, there came into my editorial sanctum a young woman accompanied by a somewhat elderly man. "Look at that nose," she said, and with the words demonstrated how the organ referred to might be turned right, left, upward or downward according to the direction in which her fingers impelled it. "Dr. —— did that," she said. "He promised me that he wouldn't use paraffin, and then when he got me in the chair he injected it. We've already paid him \$300 for taking the bags out from under Joe's eyes, but this is terrible." And Joe, whose eyes still bagged a little, interjected: "I held the umbrella over her all the way over here so that nose would stay up until we got here." The lady had small chance of redress, for a complaisant State finds it difficult to interfere with the practitioners that it has once licensed, and the charlatans, anticipating difficulties, are protected by insurance companies which agree to fight their damage suits.

An especially rich field for the plastic surgery quack is the

child or adult suffering from cross-eye. The majority of the cases are caused by eye strain accompanying far-sightedness. Nowadays the eyes are first examined by a competent eye specialist, and corrective glasses are tried before any operations are attempted. But the plastic surgery quack guarantees to cure by a simple operation, knowing that his guarantee is worthless. In more severe cases due to a deficiency of the muscles of the eye, surgeons who have specialized in the work will shorten a muscle or change its place of insertion. Each case demands careful study and accurate measurements which the plastic surgery quack is not competent to make and he can never obtain a competent eye specialist to help him. In several instances after enough patients have suffered the loss of an eye, State officials have been able to secure cancellation of the license to practice.

Cosmetic operations are most commonly sought by elderly women in love with young men, by aging actresses eager to continue profitably as *ingenues*, by women whose husbands have lost interest in them, by pugilists who have fought to financial success at the cost of facial continuity, and finally by foolish little salesgirls, stenographers, clerks, aspirants to the movies, sheiks, and what not. The most popular operation, perhaps, is that for the reconstruction of the nose, the most unsatisfactory organ ever devised by an all-wise Creator. The perfect heroine for novelists stands waiting: She is the impossible young woman who is perfectly satisfied with the nose that she was born with. There comes then the correction of outstanding ears, the reconstruction of cauliflower or tin ears, the removal of "bags" beneath the eyes, the so-called face-lifting for the elimination of wrinkles or of jowls that have sagged, the excision of double chins, and, finally, the removal of fat, principally from the thighs, the hips, the buttocks, the abdomen, and the breasts.

THE RESULTS OF PLASTIC SURGERY

When these operations are performed by competent surgeons under the best of conditions the results are frequently successful—provided, however, (a) that there is no second-

THE CULT OF BEAUTY

ary infection, (b) that the tissues of the patient have sufficient recuperative power, (c) that the skin of the patient does not tend to the overgrowth of the scar tissue called "keloid," (d) that the accumulation of fat is not due to some inherent disturbance of the bodily processes particularly involving the glands of internal secretion, and (e) that the surgeon is lucky. Unfortunately, there are records of hundreds of cases in which the surgeons were *not* lucky—indeed, so many that reputable surgeons hesitate to undertake such procedures unless the defects are flagrantly disfiguring or involve a serious disability. During and after the war the government provided the wherewithal for stays of many months in hospitals for soldiers undergoing repeated reconstructive operations. In the great manufacturing industries patients are sometimes severely injured through inadvertent contact with Frankensteinian machines, and it becomes necessary to rebuild features or to replace scalps that have been torn away. Great hospitals and funds are available for carrying on such surgical procedures. But only a few really competent surgeons find time or inclination for the type of plastic surgery performed wholly for esthetic reasons. That is the field which has been invaded and which is largely controlled by charlatans.

THE CARE OF THE HAIR

Somewhere toward the end of those vaudeville acts in which a young gentleman and a young lady indulge in acrimonious remarks relative to the merits of the sexes, the lady is likely to remark: "Well, in one way a woman is smarter than a man, anyhow." "What's that?" asks the feeder. "Well, you take a bald-headed man, he buys hair-tonic; but a woman buys hair."

The truth in the jest is apparent. The promotion, retention and replacement of the hirsutage which is a surviving vestige of *Pithecanthropus erectus* gives occupation to thousands of men and women. The changes of fashion in coiffures, the invention of electrical devices of Goldbergian intricacy for making curls and waves, the creams, lotions,

oils and pastes for washing and giving luster to the hair, require the services of thousands of experts. The current styles of bobbing, shingling or otherwise trimming what used to be called woman's crowning glory have made the barber-shop a delicately scented boudoir without even a cuspidor. Finally, there are the diseases of the hair resulting from infection with parasites, bacteria, or fungi, which give concern to the medical specialist in dermatology. With the desirability or not of the current styles I am not here concerned, for I am inquiring more particularly into matters of fraud and deceit.

Among all the fallacies attaching to the care of the hair none is so persistent as the belief in the virtues of the so-called singe, recommended to overcome splitting at the ends and to prevent the falling out of the hair. The tonsorial artist avers that the burning of the tip will close the pores and keep the fluid in the hair. Actually, singeing merely substitutes a charred blunt end of fused horn for one tapering to a point or cut clean across. In fact, splitting of the ends is more easily controlled by greasing the hair lightly and supplying it with the fat that is lacking. Singeing the hair ends in order to prevent the fluid from escaping is based on the misconception that the hair has a central cavity through which it is supplied with some sort of nourishing sap. The hair has no more sap than a buggy-whip; it is nourished only by the blood that reaches its root. Above the surface it is simply a spine of horn, which can be oiled from without.

The removal of superfluous hair is one of the most delicate tasks that can confront the dermatologic specialist. The fact is recognized by those state laws which, as has been mentioned, throw special safeguards around this procedure and define the specialty of "electrologist." Most dermatologists are agreed that the one certain method for permanent depilation is the use of the electric needle. The procedure is time consuming, somewhat painful, and only from five to twelve hairs are removed in an ordinary treatment. There

exist numerous chemical depilatories containing caustic substances, but they irritate the skin at the same time that they remove the hair, and since they do not destroy the hair roots they do not remove the hair permanently. There exists also the possibility of removing superfluous hair by the use of the X-ray. This method is followed by numerous so-called "Tricho Institutes," established throughout the country. But the X-ray is a two-edged sword, possessing great possibility for serious harm, as well as possibility for good when used by those familiar with its dangers. Already specialists in diseases of the skin are reporting the occurrence of hardening of the upper layers of the skin, or overgrowth of the cells, known scientifically as precancerous keratosis, in persons subjected to such treatments. In many of the colleges for the training of those who wish to devote themselves to the beauticians' art attempts are made to instruct in the uses of such apparatus, but the business itself is so new and the teachers themselves, in most instances, are so poorly informed concerning the actual anatomy, physiology and pathology of the skin that it may be said without fear of overstatement that the majority of persons now using these methods are not competent.

The removal of moles, warts, and other excrescences upon the skin is another branch of "cosmetology" that presents dangerous possibilities. For years physicians have warned against interference, except by the most careful surgery, with moles of a deeply pigmented character.

Numerous instances are reported in which cutting, burning, or otherwise tampering with such moles has resulted in the appearance of cancerous tumors and their rapid dissemination throughout the body, resulting in death. The ability to distinguish between such defects as are benign and such as are dangerous comes only with extensive study. Obviously, that knowledge is not to be acquired either by a year's apprenticeship in a beauty shop or by six months in a beauty "college."

BEAUTY PREPARATIONS

Since the profits of the beauty shop are dependent mainly upon the sale of lotions, creams, shampoos, ointments, depilatories, beauty clays, face packs, and similar preparations, the number of these increases daily. Preparations similar to most of the beauty clays, costing at retail from \$2 to \$10 a pound, may be made by mixing a pound of kaolin, or dried beauty clay, with the same weight of water. Such a preparation costs 20 cents. Nevertheless, pages in most of the periodicals addressed primarily to women contain full page announcements of Terra-derma-lax, Boncilla, Domino Complexion Clay, Mineralava, and Forty-Minute Beauty Clay.

Despite the advertisements, it is quite impossible to feed the skin by rubbing in fats or creams of any kind. Nor is cleanliness aided by plastering the surface of the skin with one type of cream after another and then being compelled to wash away the entire mess. There is no such thing as a skin food. The skin can be soothed, inflamed, or made temporarily more pliable by external applications, but it cannot be fed. Dozens of preparations for the control of pimples and blackheads are employed by adolescents, both male and female, but genuine specialists in diseases of the skin are likely to recommend simple washing, with the applications of antiseptic solutions that may be purchased for a few cents.

Mixtures to be used in the bath for the reduction of weight commonly consist of baking soda or Epsom salts slightly perfumed, and are sold for twenty to fifty times their original cost. There is, in fact, hardly a single possibility in this field that has not been astutely exhausted by the manufacturers of cosmetic nostrums.

Physicians who conduct newspaper columns devoted to answering questions from readers find that at least half of their correspondence is concerned with the problem of entrancing the opposite sex by displays of healthy beauty. Warn as one will of the folly of dependence on the cosmetic nostrum, of its inertness and sophistication, hope springs eternal and the sales go on. There is no limit to the

THE CULT OF BEAUTY

field that the cosmetician approaches. The very acme is reached in the following quotation:

The warm, pink glow of a perfectly rounded elbow is a joy unconfined to the exacting woman whose social obligations are insistent and many. Harriet I. Nash has made a Perfect Elbow possible to all by her elbow beautifier. The wrinkles and dullness common to many elbows are no longer embarrassments to be endured.

As for the results, one need not have an eye that is unusually discriminating to see that the building up of this vast trade has not resulted, on the whole, in lending a more comely appearance to the current American scene.

REJUVENATION

*"People expect old men to die
They do not really mourn old men,
Old men are different. People look
At them with eyes that wonder when . . .
People watch with unshocked eyes . . .
But the old men know when an old man dies."*

—Ogden Nasb.

THERE is no fool like an old fool—particularly in matters of rejuvenation. For the senile, tottering old men, leering passion and desire, the world has only the pity that it confers on a Faust, who bartered his soul for a few years of youthfulness; the ridicule that it darts upon a Don Quixote; the mild amusement with which it listens to the tale of Ponce de Leon; or the savagery with which it attacks the decrepit prey of physical lusts inspired by inflamed tissues, who slakes his inordinate appetites with the inveiglement of young girls. Behind all of these legends and observations lie the insights of historians who have seen fundamental biologic instincts expressing unsatisfied and hopeless desires. Here psychologists observe the last expression of the law of self-preservation, the reaction of the living toward approaching death, the feeble call on unresponsive nerves and muscles for power that they cannot give. Today the public is told again and again in sensation mongering newspapers and periodicals that the secret of restoring youthful vigor to worn-out tissues has been solved. Alas! medical scientists who like to be shown before they are convinced, mistrust the evidence. They grant readily that the senescent gray-

REJUVENATION

beard with the will-to-believe may be instilled with young ideas, but they have yet to admit that any surgical operation, any transplantation of glands, any decoction of plant, organ, or mineral remedies will confer on the withered form the machinery to put those ideas into action. Of the mechanical contrivances, the glandular extracts, and the other forms of hocus-pocus sold with claims for their ability to rejuvenate more will be said later. Now and here the disciples of the scalpel who are reaping somewhat of a harvest in the field of surgical rejuvenation will receive attention.

Man's search for the elixir of eternal youth was never a scientific one previous to the period of Brown-Sequard. Long before Brown-Sequard, however, anatomists and physiologists had been studying the nature and the functions of the male sex glands. It had been shown that the ability to reproduce was coördinate with certain changes in the body of the child that are known as the secondary sex characteristics. The voice of the boy depends, causing great embarrassment when a fine soprano statement suddenly changes to a basso growl. The first inklings of mustache and beard send him to his mirror for hours of painstaking scrutiny. He begins to take a more serious interest in the female of the species. And it was taken for granted that the development of these sex characteristics was the result of a special or internal secretion poured into the blood by the sex glands. In science, however, it is not well to take anything for granted.

In 1889, the famous French physiologist thought that he had discovered the potent substance in the extracts of male sex glands. One need not be a Freudian to realize that the terms vim, vigor, virility, or vitality are almost invariably associated with sexual power and the ability to engage in the act of reproduction. It was not strange, therefore, that attention should be turned to these organs in the search for the important substance. Indeed, the most primitive savages of cannibalistic nature were wont themselves to brew essences of the organs of the enemies whom they slew in battle, believing that the ingestion of the tissues was sufficient to confer upon them the prowess of their van-

quished foes. Nor is it surprising that Brown-Sequard, having inoculated himself with extracts of sex organs, developed a sort of similitude of youthfulness. He reported that he could now climb a flight of steps with greater rapidity and ease than before his inoculation. Nevertheless, at the appointed time, the body of Brown-Sequard went the way of all flesh. And the skeptical scientists who repeated his experiments, checking them with numerous cases and controlling them with injections of plain water instead of the extracts, shook their heads in dismay. The great scientist—for Brown-Sequard was all of that—had yielded science to enthusiasm, and his conclusions could not be sustained.

STEINACH'S THEORY

About 1903 two French biologists claimed that the secretion responsible for maleness was developed by a certain part of the male sex gland. They asserted that this portion of the gland developed particularly if the tubes leading from the gland were tied off so that the portion responsible for producing the male cells of reproduction would degenerate. And Steinach claimed that he had confirmed their experiments, and that the performance of this operation on senescent animals resulted in rejuvenation.

Now the finding of a substance or a system of rejuvenation is much like the finding of gold. Whether it is there or not, all of the unsuccessful, romantic, and adventurous experimenters rush in on the trail, and all of the aged and worn out capitalists come in as soon as convenient to take advantage of the discovery. The cry of "gold, gold," was taken up quickly by a number of young and enthusiastic investigators, who followed Steinach. Some famous actors, physicians, and financiers, who saw the waning of their power and note and of their ability to enjoy to the utmost the lives that had given them so much, became subjects of the experiment. Where there are actors, authors, and financiers, there is also always, in these modern times, good newspaper publicity. And where there is newspaper publicity not too careful as to the facts,

there are soon more applicants for operations. This, in medical science, is known as a vicious circle.

The careful experimenters who have followed the work of Steinach, checking all his results carefully on experimental animals, have demolished his claims bit by bit. Oslund of the Vanderbilt Medical School showed that the Steinach adherents had been deceived because of the type of experimental animal used. Since the theory of rejuvenescence is based on an overdevelopment of the cells within the sex gland that does not actually occur, it can be taken for granted that cutting of the ducts with the idea of producing such overdevelopment cannot cause rejuvenescence. And the work of Oslund has been confirmed by Moore and many others.

In a recent consideration of the topic of rejuvenation, Dr. William T. Belfield demolishes the belief that the sex glands are responsible for the development of the secondary sex characteristics in two succinct statements: The complete sex features of mind and body, including the external sex organs, have been found in persons in whom the so-called sex glands were absent from birth, as proved by complete postmortem examination. Furthermore, all of the sex features of the male sex, including the external organs, have been found in persons in whom the sex glands were absent from birth, but who had within the body a complete set of female sex glands. There is a great deal of much more technical evidence to support the view that the sex glands are not the only tissues concerned with establishing maleness or femaleness of any individual. Perhaps the best of it developed in experiments on hens and roosters, revealing hens possessing the comb and wattles and even the feathers of the rooster, yet living a hen's life, laying eggs and hatching them out! But what, you ask, has all of this to do with Steinach's theory of rejuvenation?

The elderly gentleman who prefers blondes is hardly likely to be deterred, by the details of technical experiments on mice, rabbits, chickens or dogs. For him, therefore, one presents the facts regarding man. For many years the operation now called the Steinach rejuvenation operation was performed on old men who suffered from enlargement of

another organ closely associated with the sexual tissues. This gland—the prostate—first received newspaper respectability when its enlargement in the case of a noted holder of public office gave it great diplomatic importance. But in not one of the hundreds of cases of cutting of the ducts reported previous to the time of Steinach did any of the meticulous surgeons who reported the cases mention any restoration of youthful vigor or anything resembling rejuvenation. This fact has been called to the attention of Steinach and of all his followers again and again in reputable medical publications.

To the proof of the scientific laboratory investigators that the Steinach method is founded on fallacy, the Steinach adherents and the surgeons who perform the Steinach operation reply with the sort of cynical shrug of the shoulders that such practical men use in answering laboratory evidence. They point with none too reluctant pride to their records of cases operated on and to the letters of testimony. Here is a simple gesture but hardly the sort of thing one expects from a scientist. The same testimonials—in fact much stronger ones—can be found for all of the nostrums and contrivances that have invaded this fertile field.

Opposed to the enthusiastic statement of Adolph Lorenz, to whom personal newspaper exploitation is no novelty, is that of Professor M. Zeissl of Vienna, that the only change he noted after his operation was less frequent sex desire than previously. There are some records of senile men who put upon their degenerated tissues far more of stress than they could tolerate. Here the illusion of vigor produced an earlier death than might reasonably have occurred without the operation and in the absence of illusion. It is in connection with this phase of the matter that the feline comes leaping forth from the enveloping sack in which it has heretofore been somewhat cautiously concealed.

In the earlier publications of the followers of Steinach, one finds no mention of any possible mental effects associated with the surgical procedure. But quite recently they mutter vaguely concerning the importance of coincident psy-

REJUVENATION

choanalysis. Apparently the patient must believe thoroughly that the operation will give him vim, vigor, and vitality, or he doesn't get it. For many years, physicians who have specialized in the diseases of the sex organs have emphasized again and again the great part played by the mind in controlling their functions. The records of the surgeons who do the Steinach operations are without scientific controls. To what extent have they checked their work by cases on whom the operation was not done, but who otherwise were put through the same procedure? Obviously such controlling of cases would be a most elementary and simple procedure, but records of such control in the publications of the promoters are sadly lacking.

Indeed, these exponents of surgical art would seem to be providing for the future in their claim that the operation may be repeated with good effect and a second revival of powers bestowed on the waning patient. Here is a biologic revolution that bewilders the imagination! The young men, handicapped in competition because of lack of experience and of the world's goods, will be compelled to struggle against their rejuvenated fathers and grandfathers, while the latter, by repeated operations, maintain a permanent lead. It's a sad, sad outlook; but fortunately it isn't true.

THE VORONOFF CONCEPTION

The contention of Voronoff, like that of Steinach, has to do with the use of sex gland material for purposes of rejuvenation. He does not, however, depend on any change in the tissues brought about by tying off ducts. He actually transplants the entire glands, and since the human material is not easily and generally available, attempts to supply the deficiency with glands derived from the anthropoid apes. In this instance also a vast amount of experimental evidence from the past and from other workers of the present is available to disprove the contention that either virility or vigor depend primarily on secretion from the sex glands. True, there are instances in which there is obvious deficiency of the sex glands and in which the transplantation of such

material results in conserving useful existence, but the records again are not such as will convince any scientific reader of the merit of the operation. In the first place there is not in any sense of the word actual prolongation of life, since none of those on whom the transplants have been done seem to live beyond the normal period. In the second place, one reads such conclusions as the following: "The pessimistic attitude of the patient and constant brooding over his inability have marred the results of the treatment." Here, again, the part played by the will-to-believe seems paramount. When all of the evidence is assembled and considered *en masse*, it becomes apparent that there is not as yet any actual proof that rejuvenation has been accomplished in a single individual, or any basis for the belief that it ever will be accomplished. There is, on the other hand, much evidence that a few surgeons, whose names are seen more often in the newspapers than in scientific periodicals, have found rejuvenation operations most valuable in their practice. Valuable to whom?

MECHANICAL REJUVENATION

The astute purveyors of mechanical devices, pills, lotions, and systems of physical culture sold by the mail-order plan have been quick to realize the wonderful "come-on" possibilities inherent in the word. The result has been the interminable repetition of the claim for renewed youth achieved through hundreds of substances and appliances. The post-office department itself is hardly able to keep pace with the new developments in the field, and its fraud orders are issued usually after the promoters have reaped a fine harvest.

The senescent man or the youthful individual who finds himself suddenly lacking in sexual vigor is a ready prey for the exploiters of mechanical devices which are urged because of their ability to encourage a physical development that seems to be lacking. The average man in this land of unenlightenment regarding the physical constitution has but slight conception of what constitutes the normal in these

REJUVENATION

affairs, either as to physical development or functional ability. Indeed, the more he meditates upon the matter, the more he is likely to be convinced that he himself is sadly lacking in these particulars, the psychology of this view being dependent upon a will to achieve rather than on actual knowledge. Moreover, the cleverly worded literature—and what a sad use of the word this is—of the salesman of various devices is calculated to intensify and emphasize this view. All of the advertising matter is a paean of praise of sexual athleticism, and a weeping and wailing, inspired to make still more mournful the sexually despondent male.

On December 5, 1925, the post-office department issued a fraud order against the manufacturers of a device known as the "Perfection Developer," one Walter H. Hartman of Columbus, Ohio, selling under the firm name of "Hart & Co." The simple device was merely a cylinder of glass connected with a pump and designed to induce a vacuum about the organs to be developed. The effects persisted only so long as the device was in actual use, and if it had any permanent effects whatever, they could only be for harm.

Another device of the same type was sold by one M. von Schwartz and William Billings of Ithaca, New York, under the name of the "Burt Vacuum Tube." This firm was debarred from the mails September 1, 1925. And there are many, many others!

These devices are typical of most of the mechanical appliances offered by mail for men lacking sexual vigor. Obviously, they can be of no permanent service. Moreover, the psychology of their use is such as to discourage any real possibility of improvement through rest, diet, and psychotherapy which long experience has shown are of value.

GLANDULAR REJUVENATORS

Public interest in any new medical development is at once capitalized by the promoters of nostrums and fallacies. It is not surprising, therefore, that increasing interest and knowledge of the glands of internal secretion should have aroused

in the minds of some promoters the possibility of unusual and unwarranted gains.

In March, 1921, the "Youth Gland Chemical Laboratories" was incorporated in Illinois; in February, 1922, the name of the corporation was changed to the "Druesen-Kraft Chemical Laboratories." Later, it became known as the "Lewis Laboratories." It was not, however, until March 19, 1925, that the United States Government closed the mails to this concern. In the meantime, it reaped a rich harvest from the unwary. The advertising literature of this concern was of a style so striking as to have merited some better use. A full-page announcement in the newspapers was headed, in two inch high, black type, "YOUR GLANDS WEAR OUT"; in the center of the page, he-men and she-women danced the one step in close embrace. And here are the phrases that brought the replies:

It is based entirely on the principle of Feeding Actual Gland Substance Direct to the Glands, thereby renewing and rejuvenating them.

This method of giving new life to the glands is advocated and endorsed by the leading students of gland therapy throughout the world—including Dr. Arnold Lorand who is generally conceded to be the greatest living authority on this subject.

The actual method of Treatment used by us is the result of exhaustive experiments covering several thousand cases, during the past two years.

The "Lewis" Treatment is Practically Never Failing.

If You Could Prevent the Wear and Tear on Your Glands Caused by Sickness, Age, Disease, etc., You Would Look and Feel as Young at 70 as at 25. Science However Has Solved the Secrets of the Glands and Now for the First Time Shows You the True Way to KEEP OR REGAIN Your Vigor by Feeding and Replenishing the Most Important Glands!

Build Up Your Glands and You Build Up Your Strength and Endurance.

The evidence is clear that the firm did exceedingly well from a financial point of view. The original price of the

treatment was \$10, which, on occasion, could be reduced to \$7.50, and, if the victim still failed to succumb, to a special offer of \$2.95. The court records in the case showed that the firm had spent at least \$300,000 in advertising, and that it had a gross annual income of between \$250,000 and \$300,000. Nevertheless, scientific evidence has shown that extracts or other preparations of the sex glands are without any power whatever when taken by mouth. They not only fail to produce rejuvenation of the entire body, but even to stimulate to any extent the particular portions of the body in which the applicant for rejuvenation seems to be especially interested.

Another concern, with headquarters in Denver, issued a booklet entitled "The Secret of Staying Young." Here were the testimonials of elderly men, 82, 83, and 84 years of age, who announced that they had lasting benefits from the treatments offered. These testimonials are just as vociferous and emphatic as those of aspirants for youth operated on by the disciples of Steinach. The treatments consisted of nothing more than dried animal glands, taken by mouth, which, as has been said, could not possibly have the effects claimed for them. The concern exploiting these desiccated glands, the "Vital-O-Gland Company," not content with depending on the mental responses of those who took its preparations by mouth, sold at the same time the usual vacuum developer, a glass tube attached to a bicycle pump. When the Government investigated this concern, it found twenty-two girls and five men occupied in sending out the literature. The evidence revealed that the gross income of the concern for 1923 was \$176,406.82. Rejuvenation pays!

The Vital-O-Gland Company and the Lewis Laboratories have been barred by the Government from the use of mails, but there still remain many concerns offering, both to physicians and to the public, glandular preparations for rejuvenation or for sexual stimulation. There will always be senescent, somewhat lewd, and sad, old men to waste the funds of their declining years on such powerless pills. The memo-

ries of youth become more and more resplendent with the passing years.

The Glandine Laboratories of Chicago and Los Angeles issues a circular with the question "Must We Grow Old?" and with the answer, "Science Says No." The treatments consist of extracts of the sex glands to be taken by mouth. The Glandex Company of New York advertised in the public press a combination of gland extracts with iron. The International Research Laboratories of Chicago advertised "Baker's Glandol," with a salacious pamphlet emphasizing the rejuvenation of man, and with such headings as "The Most Interesting Thing is Love. Don't Waste Life. Luck from Boldness, and Suppressed Desires." Where is the man who could resist the plea?

The Puritan Laboratories of Nashville, Tennessee, issues "Glandtone," offered with the claim that it will restore youthful vigor to those passing with age. The Walton Chemical Company of Chicago emphasizes the glands and says that a combination of the sex glands, the thyroid, prostate, pituitary, and adrenal, hermetically sealed, will defer old age and renew vitality. What of the impudence and psychological cleverness of its warning:

WARNING!

The country is being flooded with literature from so-called "Laboratories," offering to restore Sex STRENGTH in the forms of unsealed "Gland Tablets" or "Liquids."

Such preparations may contain some gland substance, but unless the ingredients are SEALED to preserve their strength, the potency may be entirely gone in a few days.

The Walton Treatment INSURES the STRENGTH of the INGREDIENTS and thousands have found this method SUCCESSFUL even after years and years of previous failure with other methods of treatment.

In fact, fully three out of four who write of their remarkable results with this new method, say they had taken many other Treatments or methods without relief.

Bear in mind that there is not an iota of evidence to show that any preparations of sex glands, singly or in combina-

REJUVENATION

tion, have ever been shown to have the slightest effect on the human body when given by mouth. It was the hope and the belief of Brown-Sequard that he had found such a substance. Even he thought that the taking of sex glands brought about in him a sort of rejuvenation. Yet in the more than fifty years since his passing, and since his claims were disproved, the public has not learned the truth.

RADIUM AND LIGHT

With the coming of the newer discoveries in medicine as to the effects on the human body of radium, the x-ray, and ultraviolet light, the agile-minded exploiters of the public's interest in keeping young were again quick to respond with the preparation and sale of such apparatus and material for purposes of rejuvenation. Of course, rejuvenation is not a physical state that can easily be determined accurately. The old man with declining powers is ready to welcome the slightest sign of increasing ability in physical work or in sexual power. He forgets to reason that the rest and the mental stimulation associated with any new method of treatment are likely to bring about the illusion of strength.

The manufacturer of a cabinet lined with incandescent lamps, for example, is not content to claim for it the simple uses of a sweat bath, or of heat produced by incandescent lamps. Ah! No! This simple cabinet becomes as by the wave of a magician's wand, an "Inductive Metabolizing method." And the manufacturer says:

The —— Inductive Metabolizing method gives to the world one of the greatest, if not the greatest, means of rejuvenation of the human organism known to medicine, but the part that is most interesting about this modality is that of its synergistic action with all the recognized methods of rejuvenation now in use—such as gland therapy, radioactive drinking water, baths, etc., as the results obtained by their use, when accompanied by the Inductive Metabolizing treatments, are increased tenfold.

One can almost picture him rubbing his hands in glee as he murmurs: "Rejuvenation: That's the word that gets 'em!"

The makers of apparatus containing radium or the blenders of waters which have been submitted to the rays of this wondrous element urge also its potency for rejuvenation. They point knowingly to the radioactive springs of Germany and Switzerland and cite the records of the old men who have visited those springs and returned home younger in body, if not in years. But they, too, neglect the effects of weeks of rest and freedom from care, of good diet and salubrious surroundings, and possibly—in fact, probably—of enforced inactivity for those portions of the anatomy whose physical functioning persists in remaining the center of interest when rejuvenation is discussed.

"THE NEW SCIENCE OF RADIENDOCRINOLOGY"

If radiation rejuvenates—although of course it doesn't—and if glands rejuvenate—and it has been shown that they do not—then, say the manufacturers of the Radiendocrinator, the combination will get the result. Merely ray the glands with the Radiendocrinator—price \$150—and you are there! The booklets are a hodgepodge of exaggerations, fallacies, and confusions regarding chemistry, physics, biology, glands, radium, and what not. But the convincing document is a blue-colored bonded guarantee of satisfaction or money refunded. Couched in language that seems to make the chance of financial loss to the unwary impossible, the guarantee is nevertheless a snare and a delusion. Launched originally by Dr. Herman H. Rubin, New York, as a device to be worn at night over the glands and selling at \$1,000, the apparatus is now a reflector on a stand and can be purchased for \$150. But for pure romance the literature is at least ten times as fanciful.

Quite recently newspapers reported the death of Mr. Eben M. Byers, age 51, of Pittsburgh, who had been for some years taking regularly a patent medicine containing radium, with the understanding that it would bring him back the youth that had gone from his aging tissues. Electroscopic tests, the history of this case, and the postmortem examination prove definitely that Mr. Byers died of poisoning by radium. The

REJUVENATION

preparation which he had been taking was called "radithor" and was found in tests made by Dr. Frederick B. Flinn of Columbia University to contain two micrograms of radioactive material in solution. Water jars lined with carnotite or uranium, which are presumed to provide radium drinking water for purposes of rejuvenation, constitute a potential danger because of the possibility of dangerous metallic substances being dissolved out into the water.

Radium emanation is toxic to some extent. The emanations from a gram of radium bromide will kill mice in two days. No one has really proved that radium emanation does anything in the way of rejuvenating the aging tissues. Since its exact possibilities for harm have not been established, the wise old man will let it alone.

THE HOPE FOR THE FUTURE

Even the Greek philosophers murmured that physical powers in matters of sex did not always parallel brain capacity. Strange that the sex instinct should be so deeply rooted and so prominent in life that two thousand years of experience has failed to convince men of the truthfulness of that statement.

Modern science has shown that the early detection of signs of disease by physical examination, and the establishment of a proper régime of life, including adequate rest, diet, exercise, simple personal hygiene, and freedom from worry will greatly extend the life of the average man. He may quite reasonably hope to live to seventy years, and if he is at all careful, considerably beyond that age. It behooves him then to grow old gracefully, remembering that much of the greatest work of this world that has been done in art, letters, invention, finance, and statesmanship has been done by men well beyond sixty years of age. Their minds were perhaps little given to the purely pleasurable functions of the bodies which constituted the abode for their restless spirits.

Yes, indeed, you can give an old man young ideas, but no one has ever yet found out how to give him the machinery to put those ideas into effect.

THE PROBLEM OF BIRTH CONTROL

"Nothing is more dangerous than science without poetry, technical progress without emotional content. The proof lies in the hypertrophied intellectuality and rationality of our age, and the simultaneous degeneration of sentiment to the sub-human level."—H. St. Chamberlain.

IN his presidential address before the American Medical Association in 1924, Dr. William Allen Pusey considered limitation of population, and brought to the support of an argument for birth control most of the familiar facts about the impossibility of supporting the population of the future on the land of the present. "If no effort is made at birth control," said Dr. Pusey, "nature will take charge of the situation by eliminating those less able to resist." Continuing his argument, he cited the contention of the economists that those people inherit the earth who multiply most rapidly, and that fecundity increases inversely according to the individual's position in the social scale. It seemed to him, as it has seemed to others, that this means the downfall of modern Christian civilization, with the triumph of the misery and degradation of Asia. "I particularly desire," he concluded, "that the mistaken impression should not go out that I mean to say that medicine now has any satisfactory program for birth control. It has not."

In the tomes of the ardent economists, biologists, sociologists, and philosophers who favor birth control, the eager reader will also search futilely for any practical program. His disappointment will not, moreover, depend entirely on the fact that our government, either wisely or unwisely, has

THE PROBLEM OF BIRTH CONTROL

made unlawful the dissemination of such knowledge as is available. The fact is that none of the students of the problem, not even the physicians, has ever perfected any method of birth control that is physiologically, psychologically, and biologically sound in both principle and practice. Not, of course, that devices for the prevention of conception do not exist; it is well known that they do, and that they are easily available to almost any purchaser in any drug store in America. Really the police disturb themselves much less about violation of the laws on birth control than about those having to do with liquor or singing. The difficulty lies primarily in the imperfection of the devices themselves, and in the peculiar psychology of the lower stratum of society which the birth control enthusiasts insist must be brought to the light, lest its descendants inherit the earth.

Every practical psychologist knows that such folk are not at all interested in the welfare of the United States as it may be one hundred years from now. The desire to plan for posterity—and that posterity not the next succeeding generation, but of four generations ahead—connotes a high order of intelligence and public spirit. The impulse to sacrifice the pleasure of the moment for the profit of a far removed future is within the moral scope, and always will be, of very few men, and perhaps of an even smaller number of women.

But more important than this lack of altruistic imagination is the lack of any sure device for birth control. Of all those at present available, the most ancient and most certain of all is that of simple continence. The chaste man or woman, obviously, never has a child. It is the contention of many religious and prudish persons that this continence is the only aid to the limitation of offspring that is approved by moral law. It is, on the other hand, the belief of most modern psychologists, and especially of the Freudians, that absolute continence in the presence of continuous temptation, such as must inevitably appear in the case of marriage between two persons who have for each other a profound affection, produces effects on the mental life and the daily behavior that are not conducive to a peaceful and healthful existence.

Continence is hardly likely, therefore, to appeal to the more intelligent members of the community. And it is only by the more intelligent members of the community that one may expect it to be practiced at all! The visible result of its impracticability among less reflective persons is apparent in the very fecundity that our socially minded uplifters deplore. Even recognizing the fact that the long and piteous documents from working women printed in Mrs. Margaret Sanger's *Birth Control Review* are especially selected because they are long and piteous, they may be considered, nevertheless, as evidence that continence does not work among the poor.

BIRTH CONTROL BY CONTINENCE

As everyone knows, there are short periods in the life of a woman, recurring regularly, in which the likelihood of conception is less than at other times. These are, however, so indeterminate, and the modifying factors are so many, that those who have attempted to rely on them to limit their offspring have been invariably surprised at their failure. All the remaining methods now in use are mechanical and chemical. Do they work? Recently the best authorities available in Great Britain conducted a symposium on the subject. It was the general verdict that all were unsatisfactory, although a majority agreed that a commonly known device, invented some centuries ago by an Italian named Fallopius, was better than the rest. The name of Fallopius is attached to the Fallopian tubes in women—they conduct the ovum from the ovaries to the uterus—and not to the elastic tube here concerned. The percentage of efficiency of the available devices varies from ten to somewhere about ninety per cent; none of them is perfect. But ninety per cent is not to be disregarded! Moreover, some of them may produce irritations of the tissues and grave consequences, including cancer. Their psychological effects are too well known to require discussion.

One of the difficulties of arriving at a satisfactory formula for killing any sort of organism within the human body lies

THE PROBLEM OF BIRTH CONTROL

in the fact that any solution that is sufficiently strong to kill is also sufficiently strong to irritate and destroy the living body cells. So with all the chemical substances thus far proposed for destroying or inhibiting the activity of either the ovum of the female or the sperm of the male. Practically all such substances are subject to the charge that they are too weak to be efficient, or so strong as to be distinctly injurious to the tissues, especially if used frequently. On such devices there is never any agreement.

A list of contraceptive methods recently developed by one authority includes chemical and mechanical methods, methods requiring no apparatus, permanent methods, and physiologic methods.

CHEMICAL CONTRACEPTIVES

The chemical methods comprise all sorts of antiseptics, such as are commonly advertised in these times in our best magazines with the vague allusion to feminine hygiene that modern censorship condones. The chemical substances, supposedly able to destroy the male germ cell, come in the form of douches, powders, tablets, suppositories, and jellies, all of which are somewhat smeary and subject to the disadvantages notoriously attached to chemical manipulations. They require, furthermore, immediate application, which has, to many a sensitive woman, seemed to be in the nature of a nuisance and a trial. Many a psychologist, particularly of the Freudian group, who delve so intimately into feminine reminiscences, has found the necessity for these postcontractual ablutions sufficient to bring about psychasthenic, if not hysterical, states.

The mechanical devices include not only the apparatus worn by the male and donned at the appropriate moment, but also various devices to be used by the female and placed in position well in advance of the occasion when she may consider them to be necessary. The time of many a clinic for teaching such methods is devoted to giving lessons in the application of the device as well as to its sale; nevertheless there has been many a failure due to the occlusive de-

vice being improperly placed. Some devices placed permanently within the female generative organ yield obstructions and irritations, which, as has been mentioned, are not infrequently associated with the development of cancer.

All of the methods which depend on will power rather than apparatus make demands on the psychological mechanisms to such an extent that their users are found among the clientele of specialists in nervous and mental disease. True, many a religious cult, such as the Oneida Community, has taught its participants technics involving interruption and reservation, but these, it must be observed, follow the procedure as a religious observance and not as a technic for the avoidance of progeny.

Each of the chief advocates of birth control has some method which he or she considers the ideal. But the fact that Mrs. Sanger, Mrs. Stopes, Miss Rout and Miss Bocker do not agree should be sufficient evidence in itself that the ideal has not been reached.

PSYCHOLOGY AND BIRTH CONTROL

Little is said by such propagandists about the psychological aspect of birth control, but this obviously is a matter of the greatest importance. The psychological factor, indeed, is largely responsible, not only for the frequent failure of all the common devices when applied under even the best of conditions, but also for the reluctance to utilize them, imperfect as they are, in the lower ranks of society. It would be possible here, if this were a popular, rather than a scientific, consideration of the subject, to picture a nocturnal scene between a male of the lower stratum, somewhat stimulated by alcohol, and the feminine partner of his misery, weary after a day at the washtub or scrubbing the halls of an apartment house. The mental states of the two, it must be plain, are hardly such as to lead them to pause for a consideration of their own difficulties, much less of the economic problems of the twenty-first century. The stimulated emotions of the male, coupled with the fatigued inhibitions of the female,

THE PROBLEM OF BIRTH CONTROL

are little likely to encourage a recourse to complex mechanisms in the name of humanity.

RESEARCH ON CONTRACEPTION

Medical science is not yet satisfied with the achievements of its investigators in this field. Research workers are still seeking methods which are scientifically safe and psychologically satisfactory. The two technics to which most attention is being given at this time involve the use of the X-rays and the biologic process involved in the creation of immunity. It has been shown that exposure of the ovary in the female or of the testis in the male to a sufficient dosage of X-rays results in atrophy or deterioration of the tissues, and so causes permanent sterility. But the human tissues vary so greatly in resistance and the dosage of X-rays sufficient to produce the required effect without also producing other and much more harmful effects is so difficult to calculate, that the method is not as yet practical.

The other method has been the outgrowth of experiments by such investigators as Guyer, Dittler, Metchnikoff, and McCartney. A proper understanding of it involves a knowledge of the biologic mechanism within the human body which results in the production of immunity to disease. It is known that a person who is infected with certain diseases develops resistance to future infection with those diseases by the creation within his body of antagonistic substances. In the same way, the injection into the body of certain chemical substances causes it to build up a defense against them. It therefore occurred to the investigators named to find out whether or not the female organism might be immunized against the sperm cell of the male. They were supported in their belief that it might be so immunized by observations which seemed to indicate that the female tended in time, under the ordinary process of exposure, to develop immunity to the male sperm. It is known, for instance, that the liability to become pregnant is much greater during the early years of marriage than in the later years. It is known also that there is little tendency to become preg-

nant among prostitutes, and that this fact is not altogether the result of the chronic venereal infections to which this class is subject. Finally, it was observed that there was a sub-normal tendency to pregnancy in periods following unusually frequent exposure.

The investigators prepared extracts and other preparations of the sperm cells of various animals, such as rabbits, albino rats, and chickens. These were injected into females and careful observations were made to determine whether or not they had any effect on fecundity. It was found that a definite effect did appear. Female albino rats injected with the sperm of the male remained sterile for a period of from two to twenty-two weeks beyond the normal gestation time, although their normal sexual cycle and behavior seemed to be in no way altered. These experiments were carefully controlled by injecting an equal number of rats with salt solution or other innocuous material. In 1926, however, R. M. Oslund reviewed the subject so far as experiments on rats, rabbits, and guinea pigs are concerned and concluded that any delay in conception that occurred in these experiments was the result of a general disturbance of the body by the injection of the substance rather than any specific effect of the injected compound on the male and female elements concerned in conception.

The government of Soviet Russia has recognized economic distress as an indication for the prevention of conception and is sponsoring research leading to the devising of a biologic method applicable to women. Kastromium and Kartashov of the Perm Institute of Bacteriology in East Soviet Russia have done extensive experimentation on rabbits and guinea pigs and have reported definite results in preventing conception in the injected animals following the injection of sperm cells. J. Jarcho, who has cited their experiments, repeated the work on rabbits in this country and found that, whereas many of the controls became pregnant, none of those that were injected conceived, even over a period of six months. Much more experimentation is needed, how-

THE PROBLEM OF BIRTH CONTROL

ever, before anything definite can be said as to the actual merit of this technic even in animals.

Other Russian investigators have experimented on human beings. A summary of their results is given by Babadagly of Odessa, whose paper is available through translation into Spanish. Babadagly cites experiments with this method on human beings by Schorokova, Kolpikof and Lalin. Apparently more than a hundred women have submitted themselves to such experimentation. Of seventy injected by Lalin, five became pregnant during the next five months. In the injections made by Kolpikof, sterility lasted from eight to ten months. Apparently the injections are harmless, but the work done is certainly not sufficient to define either the limitations or the possibilities.

G. Lombard Kelly has just made available the results of experiments on guinea pigs, made with a view to determining the effects of injections of the female sex hormone on conception and on pregnancy. It has been shown that the female sex hormone is the active agent in producing estrus and that injections of this hormone would throw even castrated animals into heat. In previous studies Kelly had found that injections of the serum from pregnant women would delay the onset of estrus in guinea pigs, which was interpreted to mean an excess of corpus luteum in the blood of the woman during gestation. These observations would seem to indicate an antithetic action between the female sex hormone and the corpus luteum hormone. Experiments by Smith indicated that the injection of the female sex hormone into pregnant white rats would terminate the pregnancy if it had not exceeded five days. Other investigators also, using white mice, were able to prevent conception and to interrupt pregnancy at any stage with comparatively small doses of the sex hormone. In an attempt to confirm these observations on guinea pigs, Kelly found that small doses of the female sex hormone injected for several days into female guinea pigs immediately after exposure would prevent conception in all cases in which an adequate dosage was used. With a dose ten times as great it was possible to in-

terrupt pregnancy in the animal when about two weeks pregnant, and with a dose fifteen times as great it was possible to terminate gestation after four weeks of pregnancy. In guinea pigs pregnant from six to eight weeks, injections of dosages from thirty to a hundred times as great brought an end to the pregnancy and almost invariably caused the death of the mother. Notwithstanding intensive study, it was impossible to determine certainly the cause of death. Apparently the deaths were not due to the injected material for the simple reason that dosages six hundred times the dose necessary to prevent conception, when injected into male or nonpregnant female guinea pigs were apparently not incompatible with life or health. Obviously these observations have a direct bearing on many factors concerned in sterility, the prevention of conception, abortion, and similar subjects. No doubt further research will bring to light additional results of importance.

In addition to such investigations as have been mentioned, attempts toward the production of sterility have been made by L. Haberlandt, who first transplanted into the female the ovaries of pregnant animals and who more recently has used ovarian extracts given by mouth. Haberlandt is convinced that preparations can be developed which will have the power of preventing conception even when taken by mouth. Indeed, German writers are already discussing the legal limitations that should be placed on the sale and distribution of such preparations. Other experimenters are looking into the possibility of producing artificial sterility through the limitation of vitamin E in the diet. The work cited is an indication of the extensive interest in this subject throughout the world and would seem to suggest the likelihood of a successful result some time in the future.

Obviously, if science is able to develop some such method as these, which will permit the production of sterility in individuals of the lower stratum with their own consent, which will be renewable after a definite period, and which will not depend for its effectiveness on any mental or physi-

THE PROBLEM OF BIRTH CONTROL

cal action of the persons concerned at the time of sexual activity, a feasible method of birth control will have been found. But certainly we cannot be said, as yet, to have reached any such method.

SOME FOOD FADS

*"Man is a carnivorous production,
And must have meals, at least one meal a day;
He cannot live, like woodcocks, upon suction,
But, like the shark and tiger, must have prey;
Although his anatomical construction
Bears vegetables, in a grumbling way,
Your laboring people think beyond all question,
Beef, veal and mutton better for digestion."*

Byron—"Don Juan."

Of all the people of the world, Americans are most cursed with faddists; of all of the faddists that occupy our attention the food faddists are most eccentric and most comical. We have those who believe that the eating of more white bread, more whole wheat bread, more fruit, or more raisins is necessary to healthful living.

We are admonished at every turn to eat more of this or of that, or to confine ourselves wholly to some peculiar diet. We have those who oppose acids and those who oppose alkalis. The vegetarians who attach undue evils to the eating of meat base their conclusions on the fact that the apes live on nuts, fruits, and cereals. Since most faddists are unscientific anyway, they are certainly inconsistent. The vegetarians say that animals living on a vegetable diet are strong and tractable, while the meat-eating animals are ferocious. Who, however, would care to argue that the mind of man is governed by what he eats?

Of course, the sufferer from indigestion or the man disturbed by chronic attacks of inflammation of the gall bladder or of the appendix is likely to be irritable and a gener-

ally unsatisfactory cuss to have in your circle of friends. Nevertheless, many of our greatest humorists and most efficient leaders have been men who abused alcohol and tobacco and who were epicureans at the dining table. There is something more to temperament and to brains than the eating of steak, oats, or fish. The old proverb, "Tell me what you eat and I will tell you what you are," was more a superstition than a scientific fact.

There is not the slightest scientific evidence to support the view that the eating of wholesome quantities of any single article of diet such as meat, bread, or any other of the fundamental foods is dangerous.

FASTING FOR HEALTH

Of all of the peculiar faddists of modern times, the most preposterous are those who insist on the fast way to health. The fasting road is the way to digestive ruin. The folly of fasting was long ago shown by medical scientists, and has recently been reiterated by many others. An occasional abstinence from food may be helpful in giving the tissues a rest. Prolonged fasting is never necessary and invariably does harm. As a result, the intestinal tissues lose their motility, and there is a tendency to stagnation all along the intestinal tract. As a result of the absence of food, waste products, such as bile and mucus, are reabsorbed, and the body is likely to suffer to some extent with poisoning from this matter. As evidence of the dangers of such fasting, there is constant increase in toxic substances to be found in the body excretions.

Moreover, the person who is fasting fails to have his regular intake of the necessary vitamins. It has been shown that the absence of these vitamins from the diet results in serious symptoms apart from malnutrition. Hemorrhages from the gums, disturbance of the eye, increased liability to infection, and wasting of the body are a few of the dangers.

FLETCHERIZATION

More than a quarter of a century ago a man named Horace Fletcher found that thorough chewing of the food was an aid to digestion and nutrition. Like all faddists, however, he was not satisfied with reëstablishing a simple fact that had been known for centuries, but finally came to believe that his chewing reform was the greatest discovery of all times and would revolutionize the world. Eventually, Mr. Fletcher found that when he chewed thoroughly he ate less than previously, and he finally came to the view that but little food was necessary and that any food that could not be liquefied in the mouth should be avoided. The result of such a pronouncement was a thorough disturbance of the entire body and the development of intoxication and general disability. Professor William James, the great psychologist, is quoted by John H. Kellogg as saying, "I tried Fletcherism for three months. I had to give it up—it nearly killed me."

ANCIENT FOOD FADDISTS

The weakness of following some food fad, as did Professor James when he took up Fletcherism, is a peculiar weakness that all too many great men have followed. It is a common thing to find that a genius has picked up some peculiarity and stuck to it, attributing the fact that he kept alive at all to his eccentricity of eating. Man likes to doctor himself, even if his doctoring is against all maxims of scientific knowledge or the dictates of common sense.

Old Emperor Augustus, when he was the greatest monarch on earth, took trouble to set down in his writings the fact that he invariably munched a crust of dry bread while bouncing along in his war chariot, seeking new worlds to conquer. And the great Seneca, in one of his epistles, sets down that he was a dry bread faddist, too, even in his old age, and he made his evening meal on a frugal crust, sometimes eating without sitting down, believing that it was better to eat standing up.

All the Romans, when Rome was at its greatest glory,

SOME FOOD FADS

made much of the custom of eating only one meal a day, fasting until supper, which was a meal that came some time after sunset. And the philosopher Locke, of the seventeenth century, shaping his own gastronomic destiny after the manner of the Romans, was a fanatic for dry bread.

Herodotus of Halicarnassus, sauntering through Egypt 2,500 years ago on his original one man Cook's tour, recorded one of the most curious of all the prehistoric fads and follies in the history of diet. The Egyptians, wrote Herodotus, spent three successive days of every month fasting and taking purgatives, believing that all poisons in the body were introduced through foods, and that the three days without food were necessary to let the poisons die.

In this old Egyptian diet scheme, bread played an important part, as it did in the diet of all ancient peoples. Of late years, the faddists have tried to swing people away from bread, and a new order has come in.

BREAD IN THE DIET

The romance of bread is a story that has been related many times in folklore and in written history. The rhapsodist tells of the farmer going forth at dawn to sow the seed. Below the soil the kernel gathers nourishment to reproduce itself a thousand fold. The wheat lifts its stalk to the life giving sun and rain. Men and the machines assemble for the harvest. Transportation engineers arrange for conveyance of the seed to the mill and carry the flour across the world. The housewife in Scotland turns out her scones; in France, one sees the long loaves of French bread; in Austria, the Vienna loaf; in Poland, the twist, and in our own country, the bread "untouched by human hands." Time and again the epic of the wheat and of the soil (for the epic of the soil is always the story of wheat) has been the theme of novels such as Zola's *Mother Earth*, of Knut Hamsun's *Growth of the Soil*, of Reymont's *The Peasants*, of Herbert Quick's magnificent trilogy of Iowa and the Vandermark family, and of the great story of Frank Norris, *The Pit*. The story of bread carries one back constantly to the beginnings

of things. In preparing the English system of weights and measures the pennyweight was represented by thirty-two grains of wheat. Indeed, so fundamental was bread to life that the term "baker's dozen" arose because of the strict laws laid upon bakers in the giving of proper weight, so that the careful and law-abiding members of the trade threw in an extra loaf to assure the customer that he was receiving adequate measure.

Now there was a time when a loaf of bread in these United States was just about as standard an item as a cubist painting. In those days a loaf of bread looked like bread and perhaps served its purpose satisfactorily as a vehicle for butter or jam, but so far as its content, its texture, and its digestibility were concerned, it was best expressed by the letter *x*, representing the unknown quantity. Indeed, young ladies became especially famed for their ability to turn out a specimen that would receive the approbation of the community, and many a damsel hung a blue ribbon received at the county fair as exhibit A in the parlor to attract prospective marital candidates in her direction. Many a pseudohumorist waxed wealthy on the jokes he made concerning the product turned out by newlyweds. And since those were the days before beauty shops were as plentiful as candy stores, many a young lady lacking comeliness qualified for the marriage route by her culinary capacity, with special emphasis on what she could do with flour rather than with powder. Those days, fortunately, are gone forever. Today a loaf of bread is as standard an item as the money that purchases it; the money must look and feel and weigh the same piece for piece; its ingredients must be always the same, and it must yield a certain definite value; in the same way the loaf of bread must have a definite weight, appearance, texture, and taste, and must yield a definite food and body-building value. To the physician who has to count on bread as an article in the diet of sick and well, it means much to know that there is a standard.

THE VALUE OF FOOD

The scientific study of food has followed certain definite trends. As early as 1840 it was recognized that proteins, fats, carbohydrates, mineral matter, and water were the components of food tissues. Continuously thereafter chemists were investigating constituents of food substances, and by 1895 Atwater and his associates in this country had examined and listed the chemical composition of most common foods. About this time also it became common to classify food substances wholly by their caloric value or the amount of energy that they would yield to the body when taken in and properly digested. The next two decades added to this fundamental knowledge observations concerning those mysterious substances known as the vitamins, so that McCollum and Davis were able in 1915 to formulate a theory of adequate diet. At that time they said that a diet must contain, in addition to proteins, carbohydrates, and fats for energy, inorganic salts for the building of the body and vitamins A and B necessary for proper growth and development. Later additional vitamins became known, so that the alphabetical category includes A, B, C, and D quite definitely established, and possibly vitamin X or E necessary for reproduction. When considering the value of any food today, we take into account all of these various factors, and, as is obvious to almost anyone with a fundamental knowledge of foods, no single substance provides all of the elements necessary for adequate nutrition. Milk is, no doubt, the most satisfactory single article of food consumed by man, but even milk is not a complete food when taken over a long period of time as the sole source of nutriment. One of the troubles with milk is that too much bulk is required to satisfy the body's needs. It contains 87 per cent of water and 13 per cent of dissolved substances; it happens to be rich in both calcium and phosphorus, whereas many vegetable foods are rather poor in these elements. Indeed, only the milk of animals and the leafy vegetables contain enough calcium to satisfy the needs of man. The element calcium is a most important

substance, for the human body is sensitive to changes in the amount of calcium in the circulating blood. Quite recently Collip, coworker with Banting in the discovery of insulin, has found that the amount of calcium in the blood may be controlled by an extract made from the parathyroid glands, which lie behind the thyroid gland in the throat. Experimenting with this substance, he has been able to produce remarkable changes in the body activity, merely by lowering or increasing the amount of calcium in the blood. Milk supplies not only calcium, but also certain proteins, fats, and vitamins.

Wheat, and indeed all the cereal grains, seed substances, potatoes, roots, and muscle meats lack the constituents that are supplied by milk and the leafy vegetables. The human being is supposed to be intelligent. It has been alleged that the large majority of us are morons and our dietary habits may be taken as evidence for the allegation. A moron, I may add, lest you take the newspaper definition, is an adult whose intellectual development stopped at the age of twelve. There is no law of man or of nature that compels the thinking human being to limit himself to milk, wheat, oranges, nuts, or anything else in the food category. If he is really intelligent he will want to make up his diet of a sufficient variety of foods to provide everything necessary for the proper development and stability of his tissues. He will want to satisfy the esthetics of his appetite and the limitations of his digestive apparatus. Investigations have shown that fresh fruits and certain raw vegetables ought to be included in the diet to provide adequate amounts of vitamin C. Scientific studies have shown that the proteins of the muscle of the liver and kidney are more valuable as a supplement to cereals and fats than are the proteins of milk. Indeed, it is not even certain that milk provides an adequate amount of vitamin B, and it is known that various samples of milk differ as to their quantities of vitamins A and C. Eggs contain everything necessary for the growth and maintenance of the body but are poor in calcium and unbalanced in other food principles. On the other hand, oysters, clams,

SOME FOOD FADS

and crabs contain all of the uncharacterized food substances, including iodine and vitamin C. The fact that vitamin E is present in fish oil suggests an importance for fish in the diet that has not been previously thought of. Vitamin E, it must be remembered, is a help to proper reproduction and to the avoidance of sterility. Finally, all of the natural, primary food substances, such as milk, butter, fish, and what not are not themselves standardized, but vary according to their place of production and their environment previous to use. This hasty review of the elemental values of some of the well-known food substances is indicative of the importance of a varied diet for man. Let us see how bread, as one of the fundamental and staple substances of human diet, has been gradually modified through scientific education and control to develop as nearly as possible a standard, highly nutritious, and body-building substance.

THE VALUE OF BREAD

As was intimated in opening this discussion, the bread of the past epoch had no definite constituents. It was made in many instances from flour, salt, yeast, and water alone. In other instances, it was made of the whole wheat and there were, of course, such modifications as bread made with rye, bread made with bran, and bread made with raisins and other added constituents. The baker, from the mechanical point of view alone, is not particularly desirous of preparing any special form of bread. He likes to give his customers what they want, and perhaps to approach as nearly as possible what dietary experts think they ought to have. No doubt, like all other business men, he wants to deal in a staple product and not be subject to extensive losses by the sudden growth of elemental and unjustifiable fads.

It was, no doubt, with this desire in mind that the bakers' organization established its Institute of Baking, and it was, no doubt, the same principle that urged many bakers of large interests to establish their own chemical laboratories for the study and standardization of their products. The result has been an application of the scientific facts that have

been learned relative to modern bread. This application caused the supplementing with milk of the bread made from white flour, salt, yeast, and water. The addition of milk directly to the bread rather than dependence on the house-wife to give the milk to the family at the table is well warranted, because economical and scientifically satisfactory. This does not mean to say, however, that the milk added to bread is sufficient for all dietary needs; it merely means that a bread made with milk is a better and richer bread than one made without it. In the same way a bread made with raisins or other fruits provides the added constituents of those fruits.

All breads furnish energy according to their composition. Modern bread having a scientifically established composition is a sensible food. It contains about 45 per cent starch and 50 per cent total carbohydrates, and its protein content averages between 9 and 10 per cent. It provides limited amounts of mineral salts, of fats, and of the vitamins, but it should be remembered that wheat products provide 42 per cent of the carbohydrate consumption of the United States and 26 per cent of the total calories consumed in all food substances. As may well be imagined, a loaf of bread may vary greatly according to the quantity and the nature of the constituents that go into it. A bread made with white flour, yeast, salt, malt extract, sugar, shortening, and water will not have the food value of a bread made of the same constituents with the addition of the amount of milk required by modern baking standards. Our Government permits the title, "Milk Bread," if one-third of the liquid used in making the bread is milk. A bread made with five pounds of sweetened, condensed milk per cental of flour contains about one and a half ounces of milk to a pound of bread.

Bread may be made of whole wheat and other elements of roughage and of vitamin supply that are lacking in bread made from white flour, and it is possible to prepare bread with wheat germ added to such an extent as to provide twelve times the amount of wheat germ contained in whole wheat bread. But such breads are open to certain objections

SOME FOOD FADS

so far as texture and keeping qualities are concerned. The physician who is prescribing bread as a part of the patient's diet must know the constituents and character of the bread that he prescribes.

Indeed, the situation today resembles closely the situation that existed in the drug industry before the American Medical Association appointed its Council on Pharmacy and Chemistry, and before the Food and Drugs Act of a little more than a decade past helped to clarify the situation. Today, through the Council on Pharmacy and Chemistry, physicians are provided each year with a book known as "New and Nonofficial Remedies," which gives the analyses, actions, and uses of all of the unofficial drug products available to the medical profession. At the same time the Council regularly issues reports concerning such products as are of indefinite composition or for which claims may be made that are not warranted by the actual constituents of the drug preparations. The variety of products offered from time to time by baking organizations that seem to be more concerned with profits than with public health offers opportunity for similar work in the baking industry to keep both the baker and the public informed of the actual basis on which exploiting of nostrumlike products is based. The Institute of Baking has done, and is doing, much in this direction.

BREAD FOR REDUCING

Not long since a baking organization issued, with extensive claims, a bread which bore the slogan "The Enemy of Fat." Letters at once began to come to the American Medical Association headquarters requesting information concerning this product and its actual importance as a part of the diet of those desiring to reduce. In attempting to reply to these questions, *The Journal of the American Medical Association* sought information from the American Institute of Baking and from the Westfield Testing and Research Laboratories. The information revealed that the bread advertised as an "Enemy of Fat" contained from 29 to 33 per

cent of starch and a total carbohydrate content of from 36 to 40 per cent, whereas ordinary bread contained only some 45 per cent of starch and 50 per cent of total carbohydrates. Moreover, the bread for the obese contained 18 per cent of protein as compared with 9 or 10 per cent in ordinary bread. Clearly, from these analyses, the bread mentioned had no special value in a diet for those desiring to reduce. Any woman who would eat a smaller amount of ordinary white bread or the same amount of ordinary whole wheat bread and who would follow the rigid diet recommended in each package of the bread with special claims as to value in obesity would be able to reduce just as rapidly and at less expense. These observations caused the Institute of Baking to make the statement that the claims made for weight reducing breads were misleading and exaggerated. *The Journal of the American Medical Association* supported the Baking Institute with all its force of influence and publicity in its exposure of this quackery.

WHOLE WHEAT

The very fact that wheat and bread are fundamental substances in the diet of man has made the exploitation of cereal products and of bread an attractive field for the exploiter. This, too, has influenced the manufacture of numerous whole wheat products, for which claims are made that go far beyond scientific fact. Indeed, the false and fulsome advertising has been so potent that even a circular just issued by the Children's Bureau of the United States Government advises the pregnant woman and the nursing mother to limit their diet of bread and cereals to whole grain because of the high mineral and vitamin content.

Let us consider first the manner in which it has been endeavored to relate the consumption of white flour to the cause of cancer. It is a significant observation in medical history that the advancing of numerous and peculiar theories is a good indication of the lack of any accurate knowledge as to the cause of disease, just as a multiplicity of methods of treatment is a reflection of a similar state of affairs. Fortu-

nately sufficient is known about cancer to warrant the advice that it be treated primarily by early diagnosis and surgical removal, with possible application of radium or X-ray for such purposes as may be accomplished with these methods. The world was surprised not long since by the announcement of the discovery of a new bacterial organism as the cause of cancer. For the past fifteen years the discovery of some bacterial organism associated with cancer has been an annual event. During that same period hardly a month has passed by but what the editor of *The Journal of the American Medical Association* has had submitted to him manuscripts advancing new theories as to the cause of this malignant condition, and not the least among these theories have been those associated with dietary fallacies. In England the exploiters of this peculiar idea have been such men as the surgeon, Arbuthnot Lane, and the publicist, J. E. Barker. Indeed, even Sir Clifford Allbutt before his death was drawn into the controversy in the support of whole wheat bread as contrasted with that made from white flour. It was Sir Clifford Allbutt's view that the whole wheat flour was richer, that it had a more agreeable flavor than the white loaf, which he said was insipid, and that the vitamins are illusive and must be sought in the whole grain. Once this view was advanced, others came to its support, and medical health officers and general practitioners did not hesitate to advance their opinions. Arbuthnot Lane committed himself some years ago to the view that most of the ills of mankind are caused by intestinal stasis or constipation. He urged the use of whole wheat bread to relieve constipation and he short circuited the intestines and removed their kinks as a quick surgical road to the relief sought. It was a witty American surgeon who commented: "It's a long lane that has no kink."

As might have been expected, it was not long before the British hyperenthusiasm infected the United States. Among the first to seize upon this conception for journalistic exploitation was the organ of that most erudite of automobile manufacturers, Mr. Henry Ford. The man, who found difficulty in distinguishing between Benedict Arnold and Arnold

Bennett, did not hesitate, through the periodical that he sponsors, to support the view that the eating of white flour bread is responsible for cancer. There was about as much actual knowledge behind the latter opinion as behind the former. There is not an iota of scientific evidence that the eating of white bread, or any other kind of bread, will cause cancer, and not the slightest reason to believe that the use of whole wheat bread will in any way prevent it.

Before making a definite statement as to the actual value of white flour bread as contrasted with whole wheat, it should be emphasized again that neither white flour bread nor whole wheat bread constitutes a single article in diet for any intelligent person. As pointed out by McCollum, there are many reasons why the American can eat white flour bread satisfactorily. "White flour," he says, "keeps much better than whole wheat flour, and so can be handled with less commercial hazard. The American public likes white flour bread, and I do not see any reason," he continues, "why this taste should be disturbed. The important thing is to insist upon the consumption of a sufficient amount of what I have termed the protective foods—milk and vegetables of the leafy type—to insure that calcium deficiency, and the vitamin deficiency of white bread will be made good." If baking technologic research is able to incorporate larger amounts of milk solids in the loaf of bread or otherwise to insure a sufficient amount of calcium and the important vitamins, even this charge cannot rest against white flour bread.

The supporters of whole wheat as against white flour for dietary purposes argue that the human bowel requires a certain amount of roughage in order to exercise its functions satisfactorily. This point must not be considered without reference to the varying conditions that may exist in different individuals. Dr. W. C. Alvarez of the Hooper Foundation for Medical Research has vigorously attacked the unguarded and unqualified recommendation of coarse food substances. "Some men and women can be greatly helped by bran," he says, "and their constipation can be cured if

they happen to have the digestion of an ostrich; but if they happen to have congenitally defective or handicapped digestive tracts; if they have ulcers or narrow places, they cannot handle the mass of indigestible material, and they promptly get into trouble." Many other dietary substances such as celery, lettuce, spinach, and raisins provide roughage. Why ask bread to be like Messalina—all things to all men? It is for the individual physician, knowing the condition of the intestinal tract of the person with whom he is especially concerned, to determine whether or not that person ought to use breads or other foods that depart from the standard product or from the normal diet. For those who do not have such special recommendation, the standard white bread loaf, that forms the large portion of bread baked in the United States today, is the product to be recommended as most satisfactory.

We are a people singularly cursed with faddists. We have educational cults, healing cults, religious cults, and heaven alone knows how many peculiar promotional systems. We have dietary faddists who believe that the eating of more white bread, more wheat, more fruit, or more raisins is necessary to healthful living. The time has arrived for calling a halt to the growing procession of slogans that tend to promote panaceas for health and well-being. We are admonished at every turn to eat more bread, to drink more milk, to buy more raisins, to consume more apples, to confine ourselves to whole wheat, to try some bran, or to add one or another of a dozen different items to our daily regimen. Many persons have a limited tolerance for a food like raisins, and the victim of chronic inflammation of the intestines may hesitate to secure his iron through a "mixture of sugar and skins" as one caustic commentator characterized this confection.

The starchy foods—wheat, corn, rice, and potatoes—are universal sources of food for the body. Bread, the very staff of life, gives that feeling of satisfaction following eating that is an important factor in a suitable diet. One should not urge the sedentary, the desk-ridden, or any other mus-

cularly inactive person to eat more meat or more wheat or to increase his bread supply. Americans today tend more and more to suffer with obesity or overweight. It is the opinion of those best informed that overweight is one of the most important factors in shortening the span of human life. Physiologists have established the fact that a meal composed largely of cereals is passed through the stomach within one and a half hours, whereas the inclusion of meat will prolong the time two or three hours. In recommending a diet of cereals and starchy foods as compared with meats, fats, and cheese, these things must be taken into account by the physician.

The scientific physician welcomes the establishment of a standard loaf of bread made according to the best scientific evidence as to what is demanded in bread by the taste of the public and by our knowledge of nutrition and of the mysterious vitamins. Such a product can be included in diets both for the sick and for the well with a clear understanding of the effect that it may have on digestion and growth. The physician opposes the promotion of any single article of diet according to "the all or nothing policy" as the one substance important to health or the control of disease. In efforts at education of the public, which the modern physician believes is the most important factor in lengthening the span of life, faddist notions must be attacked with all the vigor and influence that the scientific pen can command either by purchase of advertising space or by the contribution of articles published for the public good. The time is near at hand when the compliment given by Don Quixote to a knight of his acquaintance may be used without fear of attack from any meticulous critic. The Don remarked to his squire, Sancho Panza: "He is as good as good bread." Man does not live, however, on bread alone. The important thing is the consumption of a sufficient amount of all good substances to insure that the deficiency of minerals and of vitamins, and of other important constituents is fully supplied.

DANGEROUS FOOD COMBINATIONS

The most recent idea exploited commercially by food faddists is the dangerous food combination theory. Recently Dr. Agnes Fay Morgan, chairman of the department of household science in the University of California, discussed this subject. The food faddists claim that some combinations are deficient because they leave out important substances; but most frequently they claim that combinations of acid foods such as fruits, along with starches such as bread and potatoes, are unwise because the acid will prevent the digestion of the starch. Such a statement can only come from complete ignorance of the process of digestion. Actually there are digestive ferments for starches released far down in the intestines.

The same faddists will claim that proteins and starchy food must not be eaten together, notwithstanding the fact that at least five generations of Americans have been reared on a diet consisting mainly of meat and potatoes. Faddists claim that milk and fruit acids must not be eaten together, because the acids curdle the milk. Who would care to give up strawberries or raspberries and cream? One need not do so! Just as soon as the milk reaches the stomach it comes into contact with a secretion that is largely acid. Many physicians who take care of babies advise the addition of acid to the milk fed to the infants because they believe that it helps their digestion.

There is no more evidence that excessive alkalinity is desirable for the human body than excessive acidity. Physiologists have learned to appreciate the fact that the tissues have a certain normal acidity and alkalinity and that the patient is best served by maintaining the normal under most conditions. The human body is provided with factors of safety in its functioning and tends to adjust itself. Food faddists constantly strive to break down the normal borders.

THE VEGETARIANS

The vegetarians believe that meat is a dangerous poison, that it creates rheumatism and gout, that meat is dangerous because it is full of germs. They reason wholly by analogy, claiming that the eating of meat makes a person savage. All of us know better than that. A friend of mine sat opposite a vegetarian in a restaurant. My friend was a great lover of steaks and ordered a large one. A fanatic in the health field likes to tell everybody else about his particular notions. The cold bath fanatic comes into his office, or his schoolroom, or any other place, and announces to the world that he had his cold bath that morning. Perhaps it was necessary for him to break the ice to get that cold bath, and if he has to break the ice it makes it all the more important. The cold bath fanatic believes that to take a cold bath in the morning is the perfect road to health. He wonders audibly why you are such a weakling that you do not take a cold bath. Your only pleasure comes when he comes down with pneumonia and you can say, "I told you so."

The vegetarian fanatic is of the same type. This vegetarian looked over at my friend as he began to masticate his tenderloin steak, and he said, "I never eat meat." He said that "I never eat meat" as though he was flinging the flag of defiance in my friend's face. "And beside," he continued, "I'm an antivivisectionist. I never harm a lower animal."

My friend said, "You may not eat meat, brother, but you are going to feel like hell when you hear that you just ate a big caterpillar with that lettuce you're working on."

Just why anyone becomes a vegetarian has never been certainly established. In some instances it seems to be merely a desire to be different from the majority. On the other hand, some people are so sensitive regarding the sight of flesh or blood that they simply cannot eat meat because they see it exposed in the butcher shop. Other vegetarians are actually so concerned about pain caused to the lower animals that they avoid animal food for that reason. Vegetarians

eat milk, eggs, and cheese which, of course, are animal products as much as the flesh of the animal.

Dr. Adolphe Abrahams of the Westminster Hospital in London points out that the intestinal tract of man is incapable of manipulating a sufficient amount of vegetable material to insure receipt of the caloric value needed for good health. If, however, cheese, eggs, and milk are included, the minimum amount can be had. On the other hand, there is plenty of evidence that meat protein is superior for tissue building to vegetable protein, regardless of caloric value. An occasional vegetarian distinguishes himself as an athlete or strong man. This does not prove that everyone who is a vegetarian will be an athlete nor does it indicate in the slightest that other athletes will do well on a similar diet.

There are plenty of notions regarding the training of athletes that have never been established scientifically. One recent writer on athletics has suggested that long distance runners eat such things as will give power of endurance and increased nerve force, and that hammer throwers take food and liquids which would make flesh and bone. Such statements are absurd; there are no such foods with such specific qualities. In the older days of the time of John L. Sullivan, athletes never kept in training, but immediately after a match dropped all restrictions and took vast quantities of beer and meats and put on weight. It, therefore, became necessary for them on going into training to adopt the most rigid of diets. This brought about the notion that certain foods were not suitable for athletes.

The argument has been made that the modern sophisticated diet of man leads to gastric ulcer, cancer, Bright's disease, and similar disturbances. Recently a study was made of two native tribes—the Kikuyu and the Masai. The Kikuyu live entirely on vegetables; the Masai eat meat, blood, and milk. Neither of these savage tribes averages the European height, but the average height of the meat eater is five inches more than that of the vegetable eaters, and their strength is 50 per cent greater. It was found, furthermore, that gas-

tric ulcer, rickets, and practically every disease, except intestinal obstruction, was more frequent among the vegetable eaters than among the meat eating tribe.

There is another reason why people who eat a balanced diet are really the normal people! They are happy. The average man who lives on a one-track system is not usually happy. He is constantly distressed with an interior craving. A person whose mind is on his appetite is not a pleasant person to meet. The really pleasant people are the people who have just finished a good dinner, and who have all the happy feelings that come with a good meal.

EAT MORE CAMPAIGNS

The "eat more campaigns" are of the greatest interest to all of us because they represent the spread in the field of nutrition of what is known as propaganda or advertising. American opinion today is made largely by advertising. More people read advertising than read anything else. The advertising writers are paid higher rates than are paid to the finest writers of literature. The advertising artists are paid higher rates than are paid to the artists who draw the finest landscapes or pictures. The greatest incomes given in this country today are given to people who have the power to convince other people of the value of certain articles. Advertising has come into the scientific field of nutrition, and people are taught by advertising to eat for health reasons.

The advertiser recognized, even before the National Education Association, the fact that people are primarily interested in health. Without health there can be no happiness. Without health there can be no financial success. Health is fundamental to everything that is important in life.

The first "eat more campaign" was the campaign to eat more raisins. Now there are various uses for raisins—as has become widely known since the coming of prohibition. The advertiser, who was selling raisins on the basis of the health appeal, made his appeal on the ground that raisins give iron. A certain amount of iron is necessary in the human

SOME FOOD FADS

system, but the amount of iron that is necessary for the average man in health is not a great deal.

It has been shown at the University of Rochester in New York by experiments on animals that the amount of iron needed by the average man in order to take care of his regular iron interchange each day is a few milligrams per day. That is not a great deal of iron. That would be about as much iron as one could get by sucking hard on a rusty nail.

People began buying little packages of raisins and eating two or three or four packages of raisins per day. They filled their interiors with seeds and stems and peel and began developing irritations of the stomach and intestinal tract. The "eat more raisins campaign" gradually disappeared. Then came the campaigns to eat more pineapples, more oranges, more this, more that, and more of everything.

THE VITAMINS

The wise man of today eats a widely varied diet. He recognizes that there are all sorts of food substances which go to make up a balanced diet. He recognizes that one has to eat certain quantities of proteins of various types, carbohydrates, and fats, mineral salts, a certain amount of cellulose to represent the ash, and the roughage that is necessary in the diet. He recognizes the importance of the mineral salts, such as iodine, calcium, phosphorus, and iron, and he recognizes the necessity for the vitamins—A, B, C, D, E, and as far up as you can go with actual knowledge.

A teacher asked a little boy one time to write an essay. He was a little doubtful what to write about. She said, "Just write what is in you." He gave it a great deal of thought and finally he wrote, "In me there is an all-day sucker, my cereal, stomach, liver, and lungs, and the bowels, which are a, e, i, o, and u, and sometimes y and w." Most people know just about that much concerning the vitamins.

We must consider the vitamin, not only in its relation to complete deprivation, but also as to the value of small amounts in all diets. We know if a child or an animal, such as a white rat, is deprived completely of vitamin A, that

FADS AND QUACKERY IN HEALING

animal will develop xerophthalmia, and be easily infected with respiratory disease and other types of infection. If deprived of vitamin B, its appetite and digestion suffer. If you deprive it of vitamin C, it is likely to get scurvy. If you deprive it of vitamin D, it develops rickets, and if you deprive it of vitamin E, it will lose the power of reproduction.

Those are the end results of the deprivation of vitamins, but we have not yet come to the point where we actually know the results of vitamin deficiency in small amounts—of relative vitamin deficiency. This must concern the students of the science of nutrition for the near future—the question of what happens when a person is deprived of relatively large amounts of the vitamins, but still gets some. We are going to find that when we apply all of the knowledge that we now have on nutrition we are going to be able to make a better type of human being than exists upon the world today.

DRUGS AND FOOD IN MEDICINE

The evolution of therapeutics constitutes one of the most interesting chapters in the history of medicine. The magical formulas and the therapy based on analogy, which were the basis of medical treatment before the time of Hippocrates, gave way to the intelligent use of physical therapy and the treatment based on scientific observation, which were the distinguishing characteristics of the Hippocratic school. The didacticism of Galen, which dominated medicine for some eight hundred years, must be considered the basis of the therapy by fixed formulas and shotgun prescriptions, which yielded only with the advent of scientific pharmacology and with the development of the work of the Council on Pharmacy and Chemistry of the American Medical Association.

Although not completely successful, the efforts of this Council have made a distinct impression on American therapy, and the results of its work will be even more apparent in a coming generation than they are today. It must be borne in mind that the work of the Council on Pharmacy

and Chemistry began coincidentally with the work of the Council on Medical Education and Hospitals. The graduates of the 170 medical colleges, which have been reduced to the 70 class A schools of today, still practice among us. These graduates constitute the group to whom some fifty manufacturers of fixed formulas and unscientific preparations appeal.

The development of our scientific knowledge of foods is much more recent than such knowledge as we possess concerning the actions of drugs. All of us can remember when the only reason foods were taken was their caloric value. We can remember the period when it was first realized that foods contain proteins, carbohydrates, fats, and mineral salts. We can remember the time when it began to be realized that there was more than one kind of protein. We can remember particularly the first announcements of the discovery of vitamins and the subsequent exploitation of this knowledge. Whenever a new discovery is made in the field of science, commercial exploiters are ready to adapt that discovery for their personal gain. The furor associated with the discovery of the vitamins has made the word itself one with which to conjure. The spring tonic of the past containing sulphur and molasses, the iron, quinine, and strychnine which has been for years the staple tonic of the dispensaries, and even such patent medicine tonics as depended primarily on old John Barleycorn for the impetus which they gave to a sluggish circulation and a lassitudinous mind have given way to the vitamin tonic and the health food.

Notwithstanding the lack of exact information on which to make definite claims for various natural as well as synthetic food products, both the medical profession and the public have been deluged with screaming announcements concerning the health-giving qualities of such preparations. Foods are sold as health foods, as tonic foods, and as vitalizing foods. This was the situation that caused the Council on Pharmacy and Chemistry to ask of the Board of Trustees the permission to appoint a Committee on Foods, which should serve in relationship to food products in the same

way that the Council on Pharmacy and Chemistry concerned itself with drug products. The personnel of the committee as first established included representatives in the fields of internal medicine, pediatrics, and biochemistry. The work has been strenuous, indeed so time-consuming and difficult as to cast a severe burden on those who have given of themselves for the benefit of the public. From time to time some of those originally on the Committee have been compelled to resign, but their places have been taken by others who have carried on continuously for almost two years.

One of the significant requirements of the Committee on Foods is to demand that any food product comply with the requirements of the Food and Drug Administration and of state regulating bodies concerned with foods. All of these have given to the Committee the highest type of coöperation in questions which have arisen and have thus made far simpler the work of both the Committee and the manufacturers who coöperate.

Every one is familiar with the great rise in the use of chocolate drinks and cocoa. Malted milk has become the staple luncheon of innumerable workers. The claims made for certain glorified malted milks indicate that their managers conceive them to be panaceas for mankind. For years, tea and coffee have been forbidden to children on the grounds that the caffeine which they contain would over-stimulate the child and that such drinks tended to take the place of milk and of more nutritious beverages in the child's diet. There has been a well defined impression that chocolate and cocoa should not be forbidden to children, notwithstanding the fact that these also contain theobromine. One of the general decisions adopted by the Committee says:

No special health claims for chocolate (plain chocolate, bitter chocolate, chocolate liquor, or chocolate paste), cocoa or products consisting in considerable part of chocolate or cocoa are permissible for children. No objection may be taken to health claims for foods merely chocolate flavored and which as consumed in probable maximum quantity are free from any probable caffeine or theobromine effect, pro-

SOME FOOD FADS

vided that health claims are permissible for the basic foods themselves.

Gelatin as a dessert and as a food substance for the invalid has attained wide vogue in recent years. It has been repeatedly urged that milk fed to the infant can be made more digestible by the addition of gelatin. A careful review of the available evidence caused the Committee to adopt the decision that gelatin cannot be considered an aid to the digestibility of milk or milk products.

It has been taken for granted by many physicians, as well as by the public, that one tomato juice was like another and that there was little, if any, choice among such products. However, investigation of the methods of preparation of tomato juices indicated that some of the methods were much more destructive of the vitamin content than others. Hence the Committee adopted the decision that an accepted canned tomato juice must have a vitamin content practically equivalent to that of the raw tomato juice used, excepting that juice with materially reduced vitamin content may be accepted if the label and advertising plainly declare the tested potency as compared with that of the raw juice.

Another type of product that has had great vogue in recent years has been strained vegetables especially recommended for infants, children, convalescents, and special diets. The reason for this recommendation is the fact that the fiber of the vegetable is comminuted by the process, and in that way it is more easily handled by the digestive tract. Here again the Committee was concerned not only with the question of the vitamin content but also with the question as to whether or not the prepared product was as rich in mineral salts as the original vegetables. On these questions, the Committee has adopted several general decisions:

An accepted canned, strained, or sieved vegetable specially prepared for infants, children, convalescents, and special diets shall have a vitamin content practically equivalent to that of the raw vegetable or vegetables used or in so far

as is possible to obtain by the most modern and efficient manufacturing methods for the protection of vitamins, excepting that such special vegetable products with materially impaired vitamin content may be accepted, however, only on proper and prominent declaration on the label and in advertising of the experimentally determined vitamin content relative to that of the raw material used.

An accepted canned, strained, or sieved vegetable especially prepared for infants, children, convalescents and special diets shall have a mineral content practically equivalent to that of the raw vegetable or vegetables used or in so far as is possible to obtain by the most modern and efficient manufacturing methods excepting that those products with materially reduced mineral content may be accepted, however, only on proper and prominent declaration on the label and in advertising of the experimentally determined mineral content as compared to that of the raw material used.

In considering canned, strained, or sieved fruits for infants, it was found that fruits are commonly bleached with sulphur dioxide. The question of possible harmfulness of this procedure was carefully considered. The Committee ruled:

No objection will be taken to the presence of small quantities of added sulphur dioxide in vegetable or fruit products especially prepared for infants.

For several years the public has been besieged with the claims made for products containing various amounts of bran and cellulose. It has been argued that such foods are healthful in that they overcome constipation and relieve the associated symptoms. On the other hand, competent gastroenterologists are convinced that too much roughage in the diet will irritate the gastro-intestinal tract, and that its use may be exceedingly harmful in cases of ulcer of the stomach or duodenum and in cases of colitis.

The introduction of processes of irradiation of various cereals has also been given serious consideration by the Committee. The exact dosages of vitamins or of irradiated ergosterol necessary for health in the normal adult or in the child

have not been established. Fortunately, it is well known that there is a considerable factor of safety and that the toxic dose is hundreds or even thousands of times beyond the necessary dosage of such substance. The irradiation of foods has been advanced as a special quality to increase their sale and use. It has been suggested that the amount of vitamin D developed in some irradiated cereals is so slight that an infant would be required to eat four pounds of cereal daily to get the equivalent of a normal dosage of cod liver oil. In passing on irradiated foods, the Committee has urged that manufacturers place on the package statements of equivalents to cod liver oil in vitamin D, to carrots in vitamin A, to orange juice in vitamin C, and to yeast in vitamin B, so that the purchaser or the physician who prescribes the foods may have a more adequate conception of what is being supplied.

The Committee has deprecated the irradiation of milk on the grounds that this basic food substance might best be undisturbed. On the other hand, it has recently passed an irradiated bread, since this stable substance in the diet has been attacked as being deficient in many essential substances.

It is realized, of course, that the knowledge concerning vitamins, as well as the application of this knowledge itself to daily life, is in an exceedingly early experimental stage. Fortunately, the possibility of harm attached to the consumption of such products is not nearly so great as would be the misguided use of therapeutic medicaments.

The American people are given to all or nothing policies in what they do for health. If they are told that the consumption of a certain amount of orange juice is healthful because it provides vitamin C and tends to overcome acidosis, they are likely to drink so much orange juice as to upset the digestion and to make impossible the taking of additional necessary good substances. If they are told that vitamins are healthful, they buy anything for which a vitamin claim may be made. It must be realized that the human being can take not more than 6,000 calories a day, that the average man eats 4,000, and that probably 3,000 are suffi-

cient. These must include all the necessary food substances, and it is safe to say that the essentials will be taken in the vast majority of cases by any one who eats a well balanced diet, including meats, fruits, cereals, vegetables, milk, and eggs.

The diction of the advertiser of food is purposefully extravagant in order that he may the better influence the group to which he is appealing. The purpose of the Committee on Foods is to have the labels of food products clear as to the nature of the product advertised and its composition. The Committee refuses to accept any product that is advertised as a health food or as a tonic food. It deprecates the claim of sterility, unless the terms "sterile" and "sterilized," as applied to foods, are used with their strict scientific significance and implication only.

The Committee on Foods was created to prevent or discourage unwarranted, incorrect or false advertising claims in the promotion of food products and thus to protect the public and the medical profession against deception by untruthful or fraudulent health, nutritional, or other advertising claims for food. It is recognized that the advertising of foods is a regular practice of food merchandising and that truthful food advertising is attractive to the public. It provides them with statements concerning food values and proper nutrition, and aids in the dissemination of much helpful information. Incorrect or fraudulent food advertising, on the other hand, in proportion to its degree of incorrectness and falsity, is capable of working harm in matters of health.

WHAT AMERICA DRINKS

*"Pure water is the best of drinks
The temperance poet sings
But who am I that I should have
The very best of things?
Let dukes go freely to the pump
Let princes sip their tea
Whisky or beer or even wine
Is good enough for me."*

—Anon.

THE human being can live around forty days without food, around four days without water, and around five or six minutes without air. Water is thus the second most important substance taken into the human body. Moreover, one-half of every solid food taken into the body is water. The necessity for water lies in the fact that it enters into every chemical reaction that takes place in the human body, that it is of importance in regulating the temperature of the body and, indeed, that 100 pounds out of the body weight of an average adult human being is water.

The extent to which water is utilized is obvious from the fact that the body gets rid of at least an ounce of water every hour without any realization of the fact that the water is disappearing, this loss taking place in the way of insensible perspiration. The total amount of water lost through insensible perspiration is about a pint and a half a day. In times when the human being is subjected to considerable heat, such as occurs in a ride in an open car under the California sun, as much as 10 quarts of water may be taken into the body and evaporated from it in a few hours.

It is not surprising, then, that thirst should constitute one of the most fundamental of human sensations and that its relief should be a major desire associated with the three other fundamental desires of mankind, the satisfaction of the sense of hunger, the satisfaction of the desire for propagation, and the selection of a spiritual belief as a prop on which to lean in times of doubt.

Throughout the world men vary in the manner in which they assuage their cravings for fluids. The popularity of beer in England, of wine in Italy and France, and of certain beers and wines in Germany and Austria is proverbial. For those who prefer their beverages without too much added stimulation there remain tea and coffee.

COFFEE

The American has a consumption of coffee approximating 12 pounds per capita annually as contrasted with less than one pound for the Englishman, whereas the Englishman's consumption of tea is in inverse ratio to the coffee requirement. Milk, long considered the most important individual food substance, is universally used, but seldom does the partaker realize that it is approximately 90 per cent water.

Other beverages temporarily replace in popularity those that have been mentioned. When William Jennings Bryan became the standard bearer for grape juice, the manufacturers of that beverage profited amazingly. Buttermilk, time and again, has put forth a spurt, but fairly soon its appeal to the appetite lags, and some other fluid concoction comes to the front.

In the southern portions of the United States vast amounts of flavored syrups mixed with carbonated water are imbibed. Such drinks as Coca Cola are dependent for such stimulation as they develop on a small content of caffeine, the active ingredient of coffee.

In the more northern portions of the United States, the soda fountains do a thriving business in malted concoctions

WHAT AMERICA DRINKS

of sugary taste which cloy the appetite and thus save the hard earned shekels of the stenographers, permitting them to purchase cosmetics instead of food.

The popularity of any beverage may be built up by a sufficient amount of money spent in advertising with a suitable psychological appeal.

MALTED AND CHOCOLATE DRINKS

Conspicuous among American beverages are food drinks claimed to control nervous breakdowns, to induce prompt sleep, to relieve stomach disorders and feeble digestion, to restore the tired worker, and to act specifically as nerve foods. These mixtures are essentially concentrated extracts of malted milk and eggs flavored with cocoa or chocolate. Thousands of Uncle Sam's citizenry still believe that certain substances taken into the stomach go directly to certain organs, giving them nourishment and stimulating them to the height of activity.

The strange notion that any substance taken into the stomach will be selected by the blood and carried directly to the nerves or the brain and thereby induce alertness, intelligence, and extraordinary mental perspicacity is completely fantastic. The claims that a mixture of milk, malt, eggs, and cocoa will induce prompt, natural sleep in severe cases of insomnia is merely taking advantage of the power of suggestion and of a lack of physiological knowledge in the group to whom the appeal is made.

Doctors know that any warm drink taken at night will help to assuage restlessness. Indeed, application of the warm fluid to the outside of the body in the form of a warm bath is probably preferable to the effects of warmths derived by taking the fluid internally. Such an effect is all that can be expected of such mixtures.

The Food and Drug Administration of the United States Department of Agriculture has issued certain definitions which should be more widely known to those who indulge in beverages of various types—and who does not?

GINGER ALE AND CARBONATED WATERS

The most common dilutent of more potent beverages is ginger ale and mineral waters. Ginger ale is a carbonated beverage prepared from ginger ale flavor, harmless organic acid, potable waters and a syrup containing sugar, invert sugar or dextrose, with or without the addition of caramel flavor.

Carbonated waters are merely effervescent drinks prepared by charging ordinary water with carbon dioxide. Sometimes the carbonated waters are made from natural mineral waters obtained from various springs and containing, therefore, varying but small amounts of calcium, sulphur, phosphorus, iron, magnesium, and other mineral salts.

Root beers were formerly brewed from sweetened infusions of various roots and herbs, the gas being formed by true fermentation processes. Nowadays, such drinks are manufactured by processes which involve mixing of the herbs and subsequent carbonation.

One of the most popular root beers includes caramel, sassafras, sarsaparilla, licorice and ginger roots, birch bark, hops, spikenard and pipsissewa herbs, vanilla beans, and wintergreen leaves. These materials are ground in a mill, the ground product extracted with boiling water under pressure, caramel added, and the mixture bottled from automatic filling machines. These ingredients are utterly without medicinal value, notwithstanding the fact that for years sarsaparilla was a popular spring tonic.

SODA WATER

The soda waters flavored with fruit syrups are merely carbonated beverages prepared with flavors consisting of fruit juices and sugar, sterilized by heating and put up in bottles, sometimes sweetened with glucose, sometimes colored with artificial dyes and preserved with antiseptics.

Not infrequently citric or tartaric acid is added to real fruit syrups to bring out the flavor, and to imitation fruit syrups in order to help them to imitate the desired product.

WHAT AMERICA DRINKS

In more recent years orange juice and grapefruit juice have supplemented the juice of the lemon and of the lime in providing citrus fruit drinks. The chief advantages of citrus fruits are their content of vitamin C, the antiscurvy vitamin, and their tendency toward an ultimate alkaline reaction in the body.

Such an alkaline reaction is, of course, provided by any carbonated beverage. There is not, however, in any of the citrus fruits any miraculous principle that will yield eternal youth or that will quite certainly prevent the occurrence of the common cold.

Food fanatics, nevertheless, swill vast amounts of orange juice or products prepared from mixtures of the pulp and of the peel, in the belief that they are thereby building themselves up physically, since many of them have already broken down mentally. The orange juice combined with gin in various mixtures is employed wholly as a flavor and those who take it in this form are not concerned with vitamins.

Apparently the human body must have its fluids. The manner in which it gets the fluid is, after all, of little importance. If grape juice, malted milks, or root beer appeal to the appetite, there is no reason why water should not be taken in this manner, provided the sweet character of the beverage is not such as to ruin one's desire for necessary foods and deprive the body of nourishment.

If the pleasant tingle of ginger ale or carbonated water appeals to the palate, one may indulge in these beverages to the complete assuagement of thirst without fear of harmful consequence, and with a subsequent reaction limited quite definitely by the amounts of more potent preparations with which these basic products have been modified.

ALCOHOLIC DRINKS

And it has not yet been proved that the taking of lightly alcoholic beverages, in moderation, in any way shortens human life. However, the value of alcoholic drinks in the prevention of coughs, colds, influenza, and the like has probably been overestimated. Whisky may relieve a patient from

pain and depression; but it will not prevent pneumonia, and according to some medical authorities, it will even make the likelihood of pneumonia greater. Statistics fail to show that it has cut down the influenza death rate appreciably.

In 1925, Dr. Roger I. Lee read before the annual session of the American Medical Association his views as to the use of alcohol in medical practice. He pointed out that unquestionably the form of alcohol given has a distinct effect on the organs of taste and smell, and the form and dilution have a definite effect on the ease with which the drug is tolerated by the stomach. The great vogue of alcohol in the past was for the treatment of acute infections. It was noticed, for instance, that in such infections large amounts of alcohol could be tolerated without alcoholic intoxication, that the drug acted as a food tending to spare the tissues of the body, and that it possibly facilitated the retention of fluids in the body, a matter of great importance in fevers, in which the loss of water is great and serious.

Without regard to these factors, however, Dr. Lee finds a certain definite use for alcohol or for alcoholic liquors in the treatment of disease. "The usual immediate effect of alcohol in human beings," he says, "is the creation of the state of artificial euphoria."

The conspicuous example cited by Dr. Lee is one that has been cited to me by numerous great clinicians throughout the United States. "An elderly patient, for example, is convalescent from a mild upper respiratory infection, whether we call it a cold, the grip, influenza, bronchitis, or bronchial pneumonia. In the convalescence, the weight of years hangs heavily on the patient. He is conscious of many mild functional disturbances; he is depressed and miserable in mind and body; he is without appetite, and has a sense of prostration and weakness. To be sure, much can be done for this patient by careful nursing, tonics, and the various so-called volatile stimulants. Nevertheless, the exhibition of alcohol in some agreeable form eases the miseries of his body, encourages him to eat, and helps in the establishment of recovery."

"There are occasional cases in the early stage of pulmonary tuberculosis," Dr. Lee says, "when the little fever, the distress of body, and the consciousness of this dread malady make life appear drab, and the judicious administration of alcohol in small amounts seems to alter the gloomy outlook on life and to make endurable the rigors of the necessary regimen."

As for heart disease, here too Dr. Lee finds a use for alcohol, particularly in the patient with chronic disease of the organ that will no longer respond to the drugs used. The patient is worried and distressed. He sees constantly before him impending death. Such a patient "often finds more comfort from alcohol judiciously given in moderate doses than from opiates, which are better reserved for a future period."

Alcohol is probably never directly life-saving. That term must be reserved for such effects as are brought about by diphtheria or scarlet fever antitoxins, by digitalis, by salvarsan, by quinine, or by other remedies with specific action on the organisms that cause disease.

In most of the textbooks on the uses of drugs there is specific mention of the use of alcohol in medicine as a food. The Council on Pharmacy and Chemistry of the American Medical Association—a body composed of some seventeen practicing clinicians, specialists in the diseases of children, chemists, pharmacologists, bacteriologists, and others—has prepared for the use of teachers of *materia medica* and therapeutics a book called *Useful Drugs*. This volume aims to select from the thousands of remedies in the United States Pharmacopœia and the National Formulary those drugs and preparations of greatest usefulness to the practicing physician.

In this book it is pointed out that alcohol is used externally to harden and cleanse the skin. Its astringent action permits it to serve as a mild counterirritant, and the fact that it is strongly antiseptic in concentrations of 70 per cent gives it high usefulness in surgery. Internally, according to *Useful Drugs*, "it is a narcotic, excessive doses depressing and paralyzing the central nervous system. Small doses pro-

duce euphoria, stimulate respiration, moderately dilate the cutaneous and splanchnic vessels, and modify the circulation. It is burned in the body and thus serves to a restricted extent as a source of energy." "In well selected cases," says this guide, "especially in patients accustomed to its use, it may be very valuable; otherwise it is apt to do more harm than good."

The chief use of alcohol as a food or as a source of energy has been in diabetes. Since it is not nitrogenous it cannot replace protein substances that are broken down in the body, and it cannot replace insulin in the burning of sugar. It may act as a substitute for some of the carbohydrates in the body, however, as it serves in the burning of fats. Alcohol does not become glycogen, or give rise to the ketones, the substances that lead to acidosis and eventually to diabetic coma. Thus, with alcohol in the diet, it is possible to use a smaller amount of insulin than would otherwise be the case. The physiology and chemistry of these bodily reactions is a complicated matter.

Many competent physicians prefer to treat their cases of diabetes without the use of alcohol. No doubt an equally large number prefer to be in a position where they can use a pleasant form of this remedy if they feel the need for it. The late M. Duclaux, of the Pasteur Institute, was so much impressed by the experimental evidence on this question that he asserted that alcohol was a food surpassing starch and sugar in value, since weight for weight it contained more energy.

Many experiments have been cited to show that alcohol is harmful. Every one admits the validity of those experiments that indicated its detrimental effect on precise mental operations, such as are involved in typewriting, target shooting, typesetting, and motor driving. On the other hand, mental operations are shortened, the simple reactions and reaction times quickened, mental associations (such as making words to rhyme) made easier, and public speaking indulged in with facility. This has been thought to be the result of primary mental stimulation. But Professor W. E. Dixon, the

WHAT AMERICA DRINKS

noted British pharmacologist, emphasizes the fact that these effects are the result of inhibition or depression of the higher centers of the brain.

It is safe to say that there is not the slightest scientific evidence to indicate that alcohol taken in moderation ever appreciably shortened one's existence. "When it is taken in strict moderation, injurious effects are yet to be proved," says Professor Dixon. The evidence presented by Professor Raymond Pearl, the eminent biometristian of Johns Hopkins University, cannot be gainsaid. In a fairly large and homogenous sample of the working class population of Baltimore the moderate drinking of alcohol did not shorten life. Indeed, moderate steady drinkers showed somewhat lower rates of mortality and greater expectation of life than did total abstainers. On the other hand, those persons who were heavy drinkers of alcoholic beverages showed considerably increased rates of mortality and diminished longevity, as compared with abstainers or moderate drinkers.

HEAVY DRINKERS

The people who create an alcohol problem are obviously the heavy drinkers. They are, after all, cases for a psychiatrist, since their problem is a mental problem. They take too much alcohol because only with too much alcohol do they feel normal. The interior of the body of the drunkard shows the effects of alcohol as a poison. The final result of alcoholic intoxication repeatedly indulged in is delirium tremens—certainly a state of disease requiring serious consideration.

Professor Pearl emphasizes the beneficial effects of alcohol on the race, since it has a remarkably sharp and precise selective action on germ cells and developing embryos, killing off the weak and defective, and leaving the strong and sound to survive and perpetuate the race. The fact has been proved on guinea pigs, fowls, rats, mice, rabbits, frogs, and insects. But if this fact is applied to the human race, an entirely different point of view must be held, since the care of such weak, defective, or otherwise impaired specimens

as come through embryonic life to human existence is a social problem.

Professor Pearl insists that the prevalent notion that parental alcoholism tends to cause the production of weak, defective, or monstrous progeny is not supported by the extensive body of experimental work that has been done on the problem. But there is some evidence to sustain this point of view. The German scientist, H. W. Siemens, states the matter briefly: "The cultured peoples of antiquity disappeared, despite the fact that they had no syphilis and that the alcohol industry was unknown to them. No uniform explanation of the downfall of all vanished peoples is afforded, therefore, by pointing to alcohol, to syphilis, or any similar agent. Above all, we know far too little as yet with regard to the influences that cause alterations in the germ plasm to permit us to draw any conclusions that would guide us to logical action."

SCIENTIFIC EVIDENCE ON PROHIBITION

A debate took place not long ago on prohibition. There was a dry lecturer—dry in more than one sense. He was lecturing on the advantages of a perfect heredity, and he thought he would give a few examples. He looked out into the audience and he said, "Is Mr. Eckles in the audience?"

An old man up near the front said, "I am here."

"Will you stand up?"

He stood up.

"How old are you?"

"I am seventy-six years old."

"Are you a total abstainer, Mr. Eckles?"

"Yes, I never took a drink in my life."

The lecturer said, "Ladies and gentlemen, look at that man. Seventy-six, and never took a drink in his life. Isn't that wonderful? Is Mr. Thompson in the audience?"

A fellow away in the back says, "I'm here."

"Stand up, will you, Mr. Thompson?"

Mr. Thompson stood up.

"How old are you?"

"Eighty-one years."

"Mr. Thompson, have you been a total abstainer?"

"Yes, indeed."

"Ladies and gentlemen, look at that wonderful man. Eighty-one years old. A total abstainer. Think of that! Think what prohibition will do for you."

Then an Irishman, away in the back of the hall said, "Hold on a minute. Is this an open meeting? Can anyone say a word?"

The lecturer said, "Yes. Anyone who has anything to contribute is welcome to stand up and give his views and evidence on this particular occasion."

The little Irishman stood up and he said, "It's this way. My father died about six years ago and he was ninety-six years old. He took his first drink when he was fourteen years old and he had two drinks every day after that until the day he died, and he is dead now about six years. Last week they called us up from the cemetery and said they were going to move the cemetery and asked us to come out and take the old man up. We went out and dug him up. We opened the coffin and looked at him, and by golly, he looked better than either one of these two fellows you have just had standing up here."

The story is told merely to indicate how bad the evidence can be that is sometimes used to support arguments in the field of therapeutics.

LIGHT, HEAT, AND ELECTRICITY

"A fool's bolt is soon shot."—Old English Proverb.

No doubt the first agents of treatment used by man were those which could be had through simple adaptations of things natural. The application of heat and cold, rubbing and massage, and the use of water and of sunlight are as old as man himself. In the aphorisms of Hippocrates one reads of the uses of such methods; even at that time sound observers seem to have realized that these agents may act for good or for evil.

"Heat is suppurative," says one aphorism, "but not in all kinds of sores; but when it is, it furnishes the greatest test of their being free from danger. It softens the skin, makes it thin, removes pain, soothes rigor, convulsions, and tetanus." But again, "Heat produces the following bad effects on those who use it frequently: enervation of the fleshy parts, impotence of the nerves, torpor of the understanding, hemorrhages, deliquia, and along with these, death." And in commenting on the latter aphorism, Galen and, still later, Celsus, said: "By 'heat' is meant 'hot water' or a 'hot fomentation.'"

Massage, too, was practiced in the earliest times. Anthropologists and ethnologists have described the practice as it exists among savage peoples today, and accounts are found in primitive medical texts. It is repeatedly referred to in the folklore of all nations, particularly in the tales of the Arabian Nights. Such massage included not only simple rubbing, but

also pinching and kneading, later classified by French and Swedish investigators with technical terms.

ANCIENT PHYSICAL THERAPY

The ancient Egyptians, the Greeks, and the Romans were firm believers in the health-giving powers of the sun's rays. Indeed, Herodotus asserted that light must be regarded by the physician who knows his business as a means of repelling illness and as a subsequent aid to recovery. There were sun rooms in the homes of all the well-to-do Romans, not glassed-in sun parlors facing north, as in our apartments today, but large central spaces, open to the sky and to the sun itself.

Humphris tells us that the first use of electricity in healing took place in the time of Tiberius, some twenty years after the death of Christ, when a physician named Scribonius Largus made use of the raja torpedo fish for rheumatism and for headaches. The electric rayfish and the electric eel of Brazil are said to be able to convey a considerable shock. Scribonius Largus was, however, known chiefly for the scope of his writings, as his name no doubt indicates. His recommendation was based, apparently, wholly on empiricism. Much the same sort of reasoning assigned unusual virtues to mixtures of drugs of foul smell or of nauseous taste. The results commonly are the proof of the power of suggestion.

Of the birth of the Röntgen ray and of the finer electric apparatus of our modern times, accurate descriptions are easily available. From the primitive observations of the past have arisen these remarkably complicated devices that have made necessary increased knowledge by the physician of physics and of chemistry, of physiology and of biology, and that call for a finer discrimination in their choice and in their application to disease than it has been necessary to accord to many of the drugs used in medicine.

The knowledge of physical therapy which forms the basis of the considerations here presented is not derived from personal observation of the devices used in physical therapy, from an intimate study of their effects on animals or on patients, or even from their actual trial on my own physical

constitution—a body inured to punishment by the trials of numerous toothpastes, breakfast foods, condensed, dried, and powdered milks, or other samples conferred on editors by earnest manufacturers and a progressive advertising department. Such statements as are here made result from the reading of innumerable manuscripts submitted by aspirants for fame in the field of physical therapy; from the reviewing of a considerable number of major *opera* that have emanated from the pens of physical therapeutic scribes, some obviously, some possibly, some ostensibly, and some not likely in the employ of concerns producing apparatus; from conferences with many specialists in this growing field, and, finally, from an attempt to apply to the assembled information what is known as editorial judgment—a thing sometimes called by cynics the result of a disordered digestion.

The use of outdoor sunlight and of baths is not an exceedingly costly procedure and it is doubtful that anyone ever spent a great deal of money on these methods of healing. The moment personal attention and intricate apparatus come upon the scene, however, there is introduced the question of financial outlay. It is pitiable indeed that many a sufferer who should have devoted his funds to the securing of proper nursing attention and of suitable residence in a sanatorium should have spent considerable amounts on manipulation by untrained hands or hands trained to unscientific performance, or that the necessary money should be devoted to the purchase of extraordinary lights or electrical devices that are found shortly on the scrap heap.

VIOLET RAYS

The credulity of mankind in regard to such apparatus is astounding. It is now beginning to be generally known that the short rays at the end of the spectrum are invisible. Nevertheless, they are badly named. True, they are in the violet zone of the spectral colors, but the mere attachment of the word "violet" to these rays causes innumerable people to believe that any violet-looking light is ultra-violet ray. Not long ago, I stopped briefly in a chain drugstore where a

statuesque blonde was demonstrating to two prosperous looking business men a new device which she called the "sun ray lamp." It was merely an ordinary bathroom heater with a violet colored bulb in the place where the usual heating element resides. She said to these two interested observers, "Gentlemen, this gives you the real violet ray." And when they answered with the usual American response, "Is that so?" she said, "Yes, and besides the bulb is medicated." Just why this second announcement should have been so convincing I have never been able to understand, but they paid their money and got a useless piece of apparatus for it.

I have seen a bald-headed barber in a barbershop waving a purple colored incandescent bulb around the head of a bald-headed man while solemnly telling him that these ultra-violet rays will cause the growth of hair. There is not the slightest evidence that ultra-violet rays applied to the head of a man with hereditary baldness will do anything but tan the skin or burn it. Certainly they do not grow hair. Nevertheless, a great syndicate of hair-growing shops for men has been built up with this notion.

VIBRATIONS

Then, too, thousands, or actually hundreds of thousands, of people have been shaking their systems into insensibility with electric belts that produce vibration, with the belief that such vibration was conducive to health and longevity. One old judge put his belt around his head to shake off a headache and instead shook loose the retina of his eye so that he developed blindness. Another corpulent business man so agitated his midriff as to bring about perforation of a gastric ulcer.

There is danger in physical therapy unwisely used, perhaps danger beyond almost any other medical methods. There is, indeed, in this field merely the beginning of scientific study notwithstanding some hundreds of years of practice.

SCIENCE VERSUS EMPIRICISM

The proper evaluation of evidence regarding the use of new methods in the treatment of disease is difficult. The patient is anxious to be well, the physician wants to see him cured or at least benefited as promptly as possible, and his friends and relatives constantly endeavor to encourage him, regardless of their actual belief as to the state of his illness. The result of this continuous positive suggestion is to lend to any method of treatment that may be employed a credence that is perhaps not its actual due. Few physicians—and, indeed, few scientists—can resist the hyperenthusiasm that is likely to follow a first successful result. The paths of the history of therapy are bestrewn with the wrecks of new cures that sailed forth as the last word in therapeutic achievement. Mental, manipulative, natural, mystical, spiritual, and other cures have been brought forth by apostles of healing and vaunted as the secret for the solution of all the problems of healing that have confronted the physician since the earliest times. But when the apostle died, or when the primal faith that animated his followers disappeared, the cure went the way of the apostle.

Now, physical therapy has been more subject to misunderstanding of its efficacy in varied conditions than has any other form used by the scientific physician. The potency of the placebo depends only on the mental suggestion and on the personality of the man who administers it. His contact with the patient is not direct. The contact of the chiropractor, the osteopath, and the religious healer consists usually of the direct laying on of hands. Few physicians of experience fail to realize the importance of such immediate relationship to the patient. If more physicians took the trouble to make thorough examinations of their patients, never failing to examine the chest after the clothing had been completely removed from the upper part of the body and using auscultation, percussion, and palpation, which are fundamental to physical diagnosis, there would be fewer failures and many more persons satisfied with the care of their physicians.

SUGGESTION IN PHYSICAL THERAPY

Without doubt, powerful suggestion is conveyed by the use of any intricate or striking mechanical method. The use of electricity, including the direct application of the current, the galvanic apparatus, pocket batteries, and all the assorted forms of waves supplied through more intricate mechanisms, as well as the use of electricity to produce heat and light, is a striking therapeutic procedure. The late—but not too late—Albert Abrams well knew the value of intricate apparatus for impressing the patient and, even more, for impressing the uncritical physician. His first venture, spondylotherapy, carried with it a physically intensified suggestion; and those later Goldbergian evolvements, the oscilloclast and the biodynamometer, were impressive in their complexity, even to some competent physicians.

Regardless of the fact that the underlying basis for many physical methods never has been thoroughly established and, indeed, is not even yet perfectly understood, the official organ of the American Electrotherapeutic Association only recently said: "The various irregular cults have also worked out in some instances methods that have sometimes succeeded where the rank and file of the medical profession have failed." The editorial referred to cites particularly the treatment of sacro-iliac strain, recommending, first, adjustment and, secondly, the application of electricity. On what basis does the editorial presume to say that displaced vertebrae once adjusted remain adjusted, unless held in place over long periods of time by methods of fixation? Who has proved that ligaments that are relaxed will resume their functions when the supposed luxations are properly replaced? Who has made the scientific studies, using the Röntgen ray and all the other methods known to modern science, by which even an iota of truth can be attached to the claims of chiropractic and, indeed, to most of those of osteopathy? Granting that there is a modicum of truth in the claims of the latter cult, what scientific organization will be willing to admit that half-educated and incompetent men with no thorough un-

derstanding of the human body and its mechanisms should be privileged to apply any single form of therapy or diagnosis?

THE DANGERS OF SYSTEMS AND SPECIALTIES

If medicine is to be partitioned off into a series of specialties and cults practiced by men who have learned only one organ of the body or only one system of diagnosing and of treating disease, medicine as a science is bound to fail. No part of the human body can be detached and treated as separate from the organism as a whole. This danger threatens all the forms of physical therapy. It was no doubt enthusiasm for a single method that caused an editorial writer in the official organ of electrotherapy to say that "physical therapy will ultimately be recognized as of greater value than all other therapeutic methods." This concentration on an "all or nothing" policy in the treatment of disease must inevitably lead to preposterous and exaggerated claims, and ultimately to the detriment of scientific practice. Physicians have watched the inroads made on the practice of medicine as a single science. They have noted the attempts of optometrists to parcel off the eye as their particular field; of cosmeticians to assume the right to treat disorders of the skin and to request legislatures to grant them power to remove moles, warts, tumors, and other excrescences; of chiropodists to assign to themselves the complete care of the feet; of chiropractors and osteopaths to make the field of manual manipulation their exclusive purview; and of some of the specialists within the ranks of medicine itself to assign all important functions to the teeth, to the lungs, or to other organs of the body. The time has come to call a halt on geographic warfare within the human body, and to look on it as a "united states" that will be at least as firmly consolidated as the forty-eight individual constituents of our government.

If electrotherapy could point to a past that was free from the faults that have marred the progress of drug therapy since the earliest times, it would need no caution as to the future. But what has become of the hundreds of galvanic

apparatus that struck amazement to the hearts of trembling children led into physicians' offices some twenty-five years ago? Where are the little electric batteries that formerly occupied the showcases in the drug stores? Indeed, what has become of the claims for high voltage Röntgen rays in the removal of deep-seated malignancy? What a brief period it required for these claims, vaunted as the last word in the control of cancer, to resolve themselves into a method used only in apparently hopeless cases! The judgment may be premature, but it is based on scientific studies made in well recognized institutions for the study of human diseases.

PHYSICAL THERAPY PROMOTION

There was a time when the medical scientist, having completed his education in the field to which he wished to devote himself, opened his office, began teaching in a medical school with which he had affiliated himself, undertook the care of patients in legitimate hospitals, and left it to the recognition of the public to advance him to the limit of his merits. Today, modern, high powered business methods applied to the practice of medicine have pointed the way to cults and to the hyperenthusiastic practitioner for promotion of his particular plans. All the forces of publicity are directed toward urging on the public the peculiar advantages that are claimed to accrue to single methods. The high priest of the peculiar system does not hesitate to instruct his followers in promotion of the system by all the arts and crafts—mostly the crafts—of salesmanship. There are physical therapists who believe that "high frequency" means the treatment of eighty patients a day. Again, organizations are established, not for study and investigation or for the promotion of knowledge in relation to the growth of any department of medical science, but primarily for the securing of public acclaim through the organization, rather than through the individual. The multiplicity of medical organizations is evidence of the fact that in some instances they are not established with investigation and study as their main objects. Consider in this connection the society called the

Association for Medico-Physical Research. In its meeting, one program is devoted entirely to the claims of the now discredited Abrams method; another, to the exploitation of methods for the treatment of cancer, not one of which is established on any sort of a sound foundation; and still others to the promotion of systems of practice that should meet with nothing but the scorn of all who consider themselves honest and ethical practitioners of medicine. One finds here names of men known as faddists, who have discarded scientific rationality. One, without regard to the established facts of science, insists that a rice diet will prevent and cure cancer. Another promotes the treatment of cancer with a serum, regardless of the fact that carefully made investigations have revealed the failure of his method. There is G. E. Harter of the Defensive Diet League of America, who has collected a lot of miscellaneous aphorisms and peculiar concepts concerning food into a system and who has inveigled dentists of this country to his support with the idea that it is the duty of the dentists to establish the food habits of the nation. Among this miscellaneous crew of peculiar faddists appear the names of some physicians whose places on the program apparently represent an attempt to camouflage, with a sort of medical aristocracy, the fallacies that occupy the major portion of the program.

BASIS OF PHYSICAL THERAPY

The results of physical therapy seem to depend on many factors. Without doubt, rays of light have many and varying effects on the human body. Attempts have been made to separate them into effects of the light itself on the tissues and into chemical effects. Electricity has the power of acting through the heat that may be produced and, perhaps, through some effects produced by the current itself not yet determined; indeed, the mechanism is no better determined than is that of immunity in general. Electric stimulation no doubt has the power to act on nerves and on muscles, producing visible motive effects; and with such effects come mechanical changes. Is it not time that intensive study be applied in an

analytic manner to determine to just what extent the benefits observed from the various electrotherapeutic measures are due to physical changes in the tissues, to mechanical changes in the tissues, to the power of suggestion, and, perhaps, to other factors of which we know nothing? Until some adequate basis on which the methods may rest is determined, no one can call such methods truly scientific. We have in physical therapy various methods of producing heat in the human body. There is the heat produced by friction; the heat produced by the external application of light, of hot water, or of other heat-producing methods; and the heat produced within the body by diathermy, by the direct injection of heating material, or by the use of methods that will draw unusual quantities of blood to a certain point. In the evaluation of any form of physical therapy, who shall say to what extent the thermic factor alone is responsible and how far the other factors that have been mentioned have a part to play?

The numerous devices for effecting the production of heat, external or internal, for the body unquestionably vary in their potency and in their mechanism. How is the individual physician who knows little or nothing of the physical basis of electricity and, in fact, who knows little or nothing of any physics at all, except in the use of the term as it applies to castor oil and cascara, to have any actual knowledge of these so-called modalities?

Drug products are compounds of chemical substances and may easily be separated into their individual ingredients. Scientific pharmacy has already made sufficient progress to warrant the statement that these ingredients will or will not do what is claimed for them. But when one is confronted with a large box beautifully trimmed with nickel plate and glass, the interior of which is a mass of wiring, spools, coils, gages, screws, nuts, and what not, and is told that, properly applied, this apparatus will cure pneumonia, neuritis, lumbago, eczema, dysmenorrhea, falling of the uterus, and falling of the palate, who is to tell one whether or not the machine will actually do all that is claimed for it? When the

textbooks in the field of physical therapy tell the physician that the spine of the patient with locomotor ataxia may be restored to its pristine glory by running a few shocks up and down from the cervical region to the coccyx, is he to discard the prognosis that he has made in the past and to tell the friends and relatives of the victim of the wiles of Venus that his lapse from virtue is to have no further evil effects? What is the physician to do when he learns that most of the textbooks in this field are the products of men who are employed by concerns selling apparatus; when he is constantly besieged with lecture courses paid for by those who have something to sell; when his office is inundated with literature telling him that his financial future depends on the purchase of a vast amount of such machinery? Clearly, a housecleaning is badly needed in this particular field.

The advance of electrotherapeutics under the guidance of its pioneers was an enthusiastic but bitter warfare against a stubborn and conservative medical profession. The introduction of unknown forces into the treatment of disease meant that physicians untrained in the basic sciences on which a comprehension of these forces depends must begin anew their period of infancy and education, or yield their patients and their livelihood to those better informed. So far as electrotherapy is concerned, physicians have felt, no doubt with reason, that they must be shown. Whether this fortunate scientific skepticism was founded on a scientific frame of mind, or was merely an obstinate resistance to what was apparently an incomprehensible phase of medical treatment, is a matter for conjecture. In any event, the inspired pioneers of electrotherapy have had little patience with opposition, no doubt feeling that it was not based on comprehensive understanding of the things which to them seemed as simple as the child's alphabet. Let us, with editorial judgment, take the middle ground. No doubt the position of the medical profession regarding physical therapy has been unreasoning and blind; but just as certainly the enthusiasms of the pioneers were a beautiful manifestation of the credulous will-to-believe. Science demands controlled observa-

tions; it requires due precautions against the will-to-believe, definite allowance for the *vis medicatrix naturæ*, and simple admission that there is much that we do not know. The repetition of these aphorisms may sound as infantile as the squeaky "mamma" of the Christmas doll; but, alas, how necessary the repetition seems to be! When the allowances are all made, it seems that more must be granted at this time to those who opposed than to those who proposed, in the field of electrotherapy.

With the passing of time, the pioneers began to adapt themselves for the most part to the knowledge that medicine began to acquire from the fundamental sciences. The discoveries in chemistry, in physics, in biology, in physiology, and in pathology began to make themselves felt in the physical therapeutic field. If one scans the reports made through the passing years, the names of masters of these related fields will be found in the records. Always apparent is the intent to eliminate the unscientific, to determine the actual physical basis of apparatus and of methods, and to detect physiologic and pathologic changes such as may have occurred.

THE TEACHERS OF PHYSICAL THERAPY

Education in physical therapy today may be had through the available literature, represented by advertisements, pamphlets, articles in periodicals and textbooks; through courses in physical therapy given by well-established schools and hospitals, by the paid representatives of manufacturing concerns, and by impromptu teachers with no credentials other than a profound belief in their own erudition; through the suave representations of detail men who know well how to befuddle the brain of the busy practitioner with a nomenclature fit for nothing so much as the construction of crossword puzzles. Indeed, like all the literature of medicine, of art, of science, of religion, and even of literature itself today, that of physical therapy may be divided into two main groups—the commercial literature and the literature of science. The groups infringe on one another to the extent that

the literature of science is commercial. Even a moron might follow easily the path of commerce or of science; but the unenlightened physician who wishes to tread the devious path between will need a guide to prevent him from straying into blind alleys and treacherous by-paths, and, indeed, from losing his way altogether.

At the meeting of the Modern Language Association held in Chicago recently, William McFee suggested that the American literature of the future would perhaps be the literature of commerce rather than the literature of science and of art. Since commercial organizations demand and pay for the best available literary talent, the magazine of the future may well consist of a central section of advertising written by masters in the literary field, surrounded by the rather dull pages of fiction produced by apprentices in the trade. Of course, even under the present it is hard to tell where the fiction ends and where the advertising begins in many periodicals. The cautious purchaser never forgets that the aphorism "Whose bread I eat, his song I sing" represents the psychologic observation of centuries.

The literature of commerce is a literature of affirmation; search as one may through page on page of circular, bulletin, or advertising pamphlet, the statement of negation is a rarity. The literature is inspirational, leading inevitably to the signature on the dotted line. Even the most stupid of readers must already have noted the application to the field of electrotherapy of the fundamental psychologic fact discovered perhaps by Messrs. Macfadden and Hearst and widely exploited in their periodicals. Most of the illustrations used in the folders on physical therapy, observant readers have pointed out, represent the application of physical therapeutic methods, not to unfortunate soldiers, coal-miners, and teamsters, but to beautiful damsels, apparently in the pink of health, who have unveiled quite excessive portions of their intimate anatomy for the local application of a one-square inch electrode or the application otherwise of the healing heat or invisible ray.

The literature of electrotherapeutics, as I have intimated,

comes sometimes frankly with the mark of commerce stamped on its pages; sometimes camouflaged behind the name of a physician who obviously is in the employ of, or has most certainly been influenced by, the concern devoted to the sale of the particular device. Frequently it is nevertheless the earnest effort of a sincere scientist to record his honest observations for the good of his fellow physicians and for the benefit of mankind. Actually, the field of physical therapy is not nearly so bestrewn with the flimsy invitations of verbose commercial barkers as was the field of drug therapy at its worst some twenty-five years ago. There are, and have been, in the electric manufacturing field producers who have seen that permanent business demanded soundness from the start. They have proceeded cautiously in the issuing of advertising matter. They have attempted to state the facts concerning their devices and left it to scientific observation by clinicians to provide the claims. On the other hand, some manufacturing concerns have champed impatiently at the delay in adoption of their devices by cautious members of the medical profession. These business men, not content with the scientific observations made in well-controlled laboratories and clinics, have gone afield for the provision of their material, or have purchased the full time of easily credulous and perhaps not too meticulously ethical observers to supply claims for their machinery. The statement is a broad one, but it will be supported in due time by documentary evidence.

An investigation of the curriculums of medical colleges indicates that but few are ready to give courses in this branch of medical treatment. A survey of the hospitals of our country finds few of them adequately equipped with physical therapeutic apparatus; many are supplied with obsolete and inefficient, perhaps sadly rusted and degenerated, types; still others, equipped in the heyday of some lax political appropriation, present whole edifices devoted to intricate apparatus, both good and bad, which lie idle because of the lack of competent men and women to manipulate them. In

this situation the practitioner turns naturally to possible sources of information.

The physician is informed by one concern or another that he may secure the privilege of instruction from an expert who is endowed by the manufacturing concern which promotes him with nothing short of celestial wisdom. The courses are offered free or for nominal sums, but are nevertheless commercial courses. Try as it may, the manufacturing concern which endeavors to promote the sale of its devices by the direct teaching of the physician cannot separate its teacher from the charge of commercialism. That teacher may be honest, his intentions may be of the best, he may even attempt to lean backward to avoid the taint of commercialism; but, as the poet eulogized:

*You may break, you may shatter the vase if you will,
But the scent of the roses (?) will hang round it still.*

Contrast with the flaming promulgations of commerce the modest announcement of the course in physical therapy offered by a university. Here is no blatant shouting of unusual virtues; merely the statement that the course has been planned for licensed practitioners of medicine only, that it includes six weeks of daily clinical work together with suitable lectures, and that it is offered to provide a working knowledge of the subject. Here is no announcement that physical therapy will bring to the practitioner taking the course extraordinary and increasing fees; no statement that the use of these electrical devices will win for him such practice as is now secured by self-advertising cultists; no inducement on the grounds that the flashy apparatus, issuing dazzling sparks and quivering rays, will attract to his books the misguided morons who are unable to distinguish between sense and sensibility. Here is the contrast between science and charlatanism.

Unfortunately, the textbooks, like the science itself, are undergoing a process of development which makes difficult dependence on any one of them. The most conservative find it necessary to limit so greatly the field of electrotherapeu-

tics, and even of light therapy apart from therapeutics, that the practitioner is likely to consider its study, and most certainly investment in apparatus, little worth while. On the other hand, the enthusiastic outbursts in volumes by accepted leaders in this field are a strain on the credulity of the most mellow of minds. One author considers that "one of the most effective uses of electricity is the relief, and at times the cure, of all degrees of descension of the uterus, except possible complete procidentia." "It is probable," he asserts, "that every puerperal woman would be the better for a course of nongalvanic rhythmic currents after cessation of the lochia." He advises "cathode depigmentation" for the removal of freckles; electric ionization for the cure of salpingitis, and, in fact, finds some use for electricity in every possible physical or mental condition that afflicts the human body. Actually, he recommends the treatment of ectopic gestation by electrocution of the fetus before the fourth month, and the use of more moderate currents afterward to promote its absorption. He wisely suggests that in the meantime the patient should be at absolute rest in bed, with the constant attendance of a nurse.

And yet these statements of presumably scientific writers on electric therapy are mild indeed compared with the lucubrations of the commercial wielders of the pen who are inhibited by no scientific doubts whatever in their development of literature that will sell the goods. Speaking of the incandescent lamp, one of them says:

When you use a thermotherapeutic light, you invoke nature's strongest force, the most permanent therapeutic power.

Another statement says of diathermy:

No physician's office, no hospital or sanitarium is complete without some good physical therapy equipment—particularly a diathermy apparatus of the portable or semiportable type. Such a machine is a very decided requisite if modern methods of medicine and surgery are to be employed.

Just how much more requisite a "decided requisite" or a "very decided requisite" may be than something that is just "requisite," deponent sayeth not.

And finally, for it would be possible to multiply these examples interminably, hearken to this section of "Resuscitated Sunlight":

We are all familiar with the marvelous vitalizing, beautifying and regenerating power of Sunlight. We have seen the earth, brown and sear in early Springtime, quicken to life and beauty; the tiny buds burst their prison cells, and develop into flower and fruitage; the fetid odors of putrescence disappear—and all, under this magic influence of the sun's rays.

Yes, more; we have watched with keenest interest the red blood come into the veins, sparkle into the eye and vigor into the limb of the anemic and invalid, through the stimulating effects of the "Sun Bath." But somehow, we limit the Electric Light to its luminous qualities, forgetful that in it we have real "bottled sunshine" under our absolute control, ready for application when desired and with the widest range of adaptation.

As the physicist has learned, the Electric Light is identical with Sunlight; in fact, it is Sunlight resuscitated from the energy long stored in the lumps of coal used as fuel. This latent energy in the coal, liberated in the furnace and transformed in the dynamo, is flashed forth again in radiance from the electric arc, or incandescent filament, on its interrupted mission of service to the world. In other words, that subtle force—that potent silent process that tints the petals of the lilac and the lily, that scents the rose and the jasmine, that flavors the ripening fruit in the orchard—is one and the same of Nature's forces, whether at work in the flower garden, on the sands of the seashore, or in the Light Baths.

It is presumed that the gentleman who wrote this statement is now more gainfully employed selling lots in Florida.

The physician who is anxious to perfect himself in the fundamentals of physical therapy, or even in the practical use of the apparatus, is confronted by a troublesome situa-

tion. As has been intimated, the schools of medicine and the postgraduate schools offer but few courses, and those not continuously. Moreover, mushroom schools have sprung up here and there to offer such courses to any aspirant, be he chiropractor, osteopath, cosmetician, chiropodist, barber, farmhand, or blacksmith. Who has defined the point at which the work of the physical therapy aide or technician ends or commences? The ignorant cultist, licensed by a too complaisant state to practice some single system of diagnosis and treatment, finds his patients seldom inclined to inquire whether or not his fundamental training warrants the use of the potent electrical devices with which he may have equipped himself. Indeed, most often this course of study has embraced some hours with the detail man or demonstrator and a cursory study of the book of directions, if he happens to be able to read. Even the "naturopath" equips himself with artificial sunlight against the day when the clouds obscure the sky, although information has not yet been received that he has secured artificial grass and bottled dew for his nightgown-clad hypochondriacs to walk in while the artificial sun may shine.

The medical practice acts of our individual states make strange allowances for all sorts of unusual encroachments on the practice of medicine. Legislators seems not yet to have realized that the ability to diagnose disease according to the facts of modern scientific medicine is, and legally should be, an absolute prerequisite to any sort of treatment. The nurse, the technician, the aide, or whatever high sounding title may be conferred on a medical assistant, gains confidence with time and soon wishes to depart from the sheltering wing of the physician whom she may assist, to establish herself in her self-constituted profession of physical therapist. In several states the new laws regulating the practice of cosmetology specifically exempt the other new profession of electrolysis so far as concerns the removal of superfluous hair, moles, warts, or excrescences from the skin.

THE FUTURE OF PHYSICAL THERAPY

Today more than seventy-five per cent of the leading hospitals of the United States have fully equipped departments of physical therapy in charge of physicians especially trained in the use of such devices and methods, and not infrequently conducted by technicians who are capable of using the apparatus without danger to the patient and under proper medical instruction. For the treatment of rheumatic disease, for the overcoming of paralysis after such diseases as infantile paralysis and meningitis, for reeducating the paralytic who is suffering with locomotor ataxia, for straightening twisted spines and for many similar purposes physical therapy is invaluable.

Standardization and control are particularly the attributes of American civilization. Proper standardization and control are only beginning to be applied to the field of physical therapy through the Councils on Medical Education and Hospitals and the Council on Physical Therapy of the American Medical Association. The setting up and maintenance of such standards mean much for the safety of the American people and for the maintenance of their health.

MEDICINE AND THE PRESS

"But let a man know that there are things to be known, of which he is ignorant, and it is so much carved out of his domain of universal knowledge."—Horace Mann, *Lectures on Education*.

SOME seventeen years ago, I originated in *The Journal of the American Medical Association* a column called "Tonics and Sedatives" in which appear each week, in addition to medical facetiae, errors of a medical nature clipped from newspapers, magazines, and books throughout the country. Glancing over the assembled material, one finds that it may be grouped according to certain definite types. First are typographical errors that do no harm to anyone. According to modern newspaper methods a hasty guess is good enough to serve the purpose as far as the name of a disease may be concerned: "Miliary tuberculosis" frequently appears as "military tuberculosis"; "hypostatic pneumonia" as "hypothetic pneumonia"; "exploratory operation" as "explanatory operation"; "cardiac decompensation" as "cardiac decomposition"; "vertebra misplaced" as "vertebrate misplaced"; "vasoligation" as "vasolitigation"; "cocci" as "cock-eye"; "prostate gland" as "prostrate gland"; "iritis" as "eyeritis"; "angina pectoris" as "angora pectoris"; and "inguinal hernia" as "lingual hernia." These errors represent the substitution of some word in common usage for a technical term requiring special knowledge. They are perhaps the inevitable result of that system of news reporting which calls for eight editions each day, appearing three to five hours before the time with which they are labeled. They result

possibly from that queer triple play, legman to telephone to rewrite man, by which most of the local news is put out.

In matters of anatomy, organs, muscles, bones, and joints may find themselves strangely displaced in newspaper reports. The fibula, from the leg, is accredited to the hip. One reads of a "mastoid abscess of the eye," whereas the mastoid is situated behind the ear. Persons are reported as dying from pleurisy of the shoulder and collar bone, of the kidney, of the heart, and of the intestines. The pleura is the membrane lining the chest cavity and covering the lung. It is spelled p-l-e-u-r-a, as can be found in any dictionary, and yet it far more frequently appears that someone has died from "p-l-u-r-a-l" pneumonia, certainly a singular statement. During the illness of President Wilson, the official bulletin, published in Washington under the editorship of George Creel, created to supply the public with facts, contained in a boxed statement on its first page, the following absurd announcement:

Owing to the various rumors that are going about regarding the condition of President Wilson, we state that he has not had a paralytic shock, nor has he had any of the other troubles about which the gossips are busy. The President is suffering from inflammation of the prostatic gland, which is properly known as acute bowel trouble.

If "inflammation of the prostatic gland" is properly known as "acute bowel trouble," the medical profession has been wrongly instructed about the matter ever since it first found out there was a prostate.

Still more remarkable statements are made as to the causes of various diseases. The excellent foreign correspondent of the *Chicago Tribune*, Floyd Gibbons, cabled that lockjaw or tetanus was prevalent because of the large number of rusty nails. Thus he perpetuated an old superstition and disregarded entirely the bacterial origin of the disease. The *Kansas City Times* remarked sagely:

William II has a bad inheritance. His great uncle, Frederick William IV, died with a clouded mind. William him-

self has had an ear abscess, the true diagnosis of which has never been made public. This has given ground to a rumor that it is of a hereditary leucorrhreal character.

Leucorrhrea, it may be explained, is a condition occurring only in women, and that, too, in regions remote from the ear. The error arose no doubt through the modest substitution, by some editor, of the word "leucorrhrea" for the name of a venereal disease which sounds much the same and which he hesitated to print.

In surgery the newspaper writer has wide latitude for his imagination. The Baltimore *Sun* sagely explains that "gastro-enteroanastamase is the medical term for ulcers of the stomach," but "gastroenteroanastomosis" is, instead, the surgical term for sidetracking the movement of food by joining together the stomach and the intestine. Another item tells of a man who was operated on for "Albee of the spine," whereas Albee is the name of a surgeon who designed the operation in which the bones of the spine are splinted stiffly together with a piece of bone taken from the leg. At least a hundred times, I have seen the statement that a leg was broken, but not fractured, and one does not have to be a physician to know better than that.

Certain remarkable tales circulate through the press periodically much as an influenza epidemic returns at intervals to devastate the populace. A news bulletin will carry the astounding information that a noted specialist has cured the eyesight of a patient by removing the eyeball, washing it, or scraping it, and returning it to its cavity. Again some press service will circulate this perennial tale. It is a figment of the imagination and possibly arises from the fact that an untrained onlooker at the ophthalmic operation becomes dizzy with the escaping fumes of the anesthetic. Here is a story that has recently made the rounds of hundreds of papers:

There is a girl here at the Shrine hospital about fifteen years old, who has a snake in her stomach. They have no idea about how it happened to be there, but the doctors think that it must have crawled in her mouth when she was

sleeping or in swimming some time. The snake is about two feet long and three inches around, and sometimes they say it is stretched out as far as it can in her stomach.

The number of amphibia, reptilia, and other zoölogical species that have been reported in the newspapers as the day's catch for some enterprising physician is legion. Sometimes they are not hooked out of the stomach from above, but removed at other orifices as the product of an unusual conception. When the stories are traced to their respective sources, they invariably degenerate into some hoax. In one case, it was discovered that some of the older nurses in a hospital were anxious to impress an innocent probationer with the wonders of medical science. The assistance of an obliging interne—the interne is always willing to oblige the nurses—was secured. At the time of the operation, the interne drew forth a squirming length of rubber tubing, the probationer was duly impressed, and a news-seeking reporter sent the story on its route.

A paragraph might be given to the story of the feverish girl of Escanaba; for almost three weeks her temperature was reported as ranging up to 118 degrees F. and once, it was alleged, the mercury blew off the top of the thermometer. Her story was not unique in the annals of medical science. Almost any hospital could produce records of patients who had attempted similar impostures and successfully eluded the detective methods of physicians over long periods of time. In the case of the girl from Escanaba, the long run of the story depended on a number of factors: the news came from a distance sufficient to deter investigation; the girl was not in a hospital where her actions could be controlled; her physicians had lost their skepticism which the great Pasteur said was the distinguishing mark of the scientist. Finally the news was handled by the Associated Press, an agency which editors have come to trust implicitly and which is ready to assume responsibility. Regardless of the fact that competent physicians all over the country de-

MEDICINE AND THE PRESS

clared the story impossible, newspapers continued to publish the event until an actual unmasking occurred.

Another point of interest is the way in which newspapers continue to perpetuate such ancient medical superstitions as, for example, the belief that prenatal impressions of the mother may mark the child. There are, of course, books of instruction for prospective mothers which suggest that they visit the Art Institute and gaze upon beautiful paintings and sculpture in order that the forthcoming progeny may resemble Venus de Milo or the god Adonis. But there is no basis in scientific fact for such a belief. Nevertheless one frequently sees in his newspaper such items as the following: from the Modesto, California, *News*:

A young French woman testifying in an alleged bigamy case here today said that a month before the birth of her child, her husband gave her a black eye. The baby was born with a black eye.

MEDICAL MISTAKES OF NOTED AUTHORS

It is apparent then that one of the great faults in the reporting of medical news is lack of accuracy in such matters as terminology, spelling, and definition. Another apparent fault is the printing of any news item of scientific interest without attempting to check in some manner its reliability or accuracy or conformity with scientific fact. It is clearly the duty of the writer of a piece of news to verify the spelling of the terms he uses, and to make sure that such terms actually exist and are used in their correct meanings. The editor shares with him the responsibility for printing a story that exploits a medical discovery that has no basis in scientific fact or that is founded on poorly substantiated evidence. No doubt, much of the difficulty is traceable to the fact that newspapers have not been and are not even today equipped with competent medical men to pass on medical news. One seems safe in assuming that the newspaper reports of medical matters represent the actual knowledge of the news gatherers and purveyors, largely in the past men

who have obtained their knowledge of journalism only in the bitter school of experience and not in the classroom, who have passed from copy boy to reporter, from the sport page to literary criticism, from police news to the drama.

Hardly one of our great fictionists has been free of errors in the medical field. In "The Meadow Lark," Edna Ferber's short story in the *Cosmopolitan*, she says of the Muller girl:

She had the short, sturdy fibula of the energetic woman and seemed to take more steps and to come down harder than was absolutely necessary.

The fibula is just one of the two bones in the leg, and the tibia is larger and more important.

Earl Derr Biggers, writing of Charlie Chan in the most carefully edited *Saturday Evening Post*, says:

Tait turned and with a firm step crossed the threshold of the parlor. For a moment he stood, looking about the group inside. Then he gave a strangled little cry and pitched forward onto the floor. Duff was the first to reach him. He turned the old man over and, with deep concern, noted his face. It was as blank as that of the dead man in Room 28.

The next instant a young man was at Duff's side, a good-looking American with frank gray eyes, now somewhat startled. Removing a small, pearl-like object from a bottle he crushed it in his handkerchief, and held the latter beneath the nose of Mr. Patrick Tait.

"Digitalis," he explained, glancing up at the inspector. "It will bring him around in a moment, I imagine. It's what he told me to do if he had one of these attacks."

But of course he meant amyl nitrite, used in angina pectoris, for digitalis is never taken that way.

In "War Nurse," Rebecca West, writing in the *Cosmopolitan*, said:

There seemed to be somebody with arms around my hips, dragging me down and down.

Something funny had happened to the room. The shadows at the end of it were flying down on my face like birds.

Presently there was blood everywhere. I was lying in it.

The men were bending over me, their flannel nightdresses flapping on their hairy legs. They were saying astonishingly sweet and gentle things; how sweet and gentle and tactful, I did not realize till afterwards. It is magnificent the way the French take certain things for granted without foolish embarrassment.

Then other people came. I was placed on a stretcher and carried to some place that I never saw, answered questions through a fog, was given treatment that made me cry, and put in an ambulance and driven back to my own hospital, where they performed an emergency operation.

What had happened was that by repeated lifting of over-heavy weights, I had gradually torn my uterus from my body. It had been hanging by a thread and when I lifted the fat man the rupture was complete.

It happened to many nurses in the war. It means, of course, that you can never have any children.

Which is quite an athletic feat for any woman and, of course, really did not happen to very many.

"The Scaler," Stewart Edward White in *The Golden Book Magazine*, makes the arteries carry sensations:

Hours later, as it seemed, they moved slowly in the direction of camp. The cold had stiffened FitzPatrick's cuts and bruises. Every step shot a red wave of torture through his arteries to his brain.

Any child with grade school physiology knows that nerves transmit the sense of pain.

O. O. McIntyre finds a complication of diseases sufficient to destroy a nation:

An East Side tenement baby asleep on floor, while her parents were having a high time at a party next door, was attacked by a sewer rat and two fingers were stripped of flesh to the bone. The child died in frightful agony of blood poisoning, lockjaw, and rabies.

Rupert Hughes, who ought to know better, says of George Washington in the new *American Legion Monthly*:

He was an ardent breeder of stock. He . . . made a great study of mules, importing the finest European breeds and putting them out to stud.

Just a mule with no pride of ancestry or hope of posterity.

An item found in the latest E. Barrington novel entitled *The Laughing Queen*:

For answer he (Julius Cæsar) caught her (Cleopatra's) jewelled hands and pressed them first to his heart and then most passionately to his lips, there holding them and feeling the blood beat in blue veins.

But the blood does not beat in the veins; only in the arteries.

In Ludwig Lewisohn's *Case of Mr. Crump*, page 111, he says:

She told him that life had been difficult and had brought on one of her heart attacks. Her heart had not been strong since her early girlhood. It was a FUNCTIONAL disorder; there was a regurgitation of both the mitral and the pulmonary valves.

But those diseases are actual organic pathologic conditions, not psychiatric, or functional.

And finally, Judge Ben B. Lindsey tries a hand at the cause of cancer in *The Companionate Marriage*:

When I say that illness often results from the effort of husband and wife to condone infidelity in each other, I don't mean "mere nervousness." The nervous tension in these cases may be so terrific as to produce glandular imbalance and profound disturbances of physiological function that can result in almost anything. Among the diseases that often result are asthma, tuberculosis, acute digestive disorders, defects of eyesight, and a long list of other troubles. Consider, for example, the remoter consequences that might come from such digestive disturbances. It is well known that some digestive disorders readily lead to duodenal ulcer, and that duodenal ulcer in turn frequently ends in cancer. Thus the chain of cause and effect may be a long and tragic one.

MEDICAL MISTAKES OF ARTHUR BRISBANE

Let us consider one of America's confessedly greatest newspaper men whose journalistic jewels are daily syndicated to millions of readers. The omniscient Arthur Brisbane never hesitates to comment on any medical subject, and almost invariably he is wrong. An engineer might admit that the omniscient one is right about everything except engineering, or a chemist might grant the authoritative character of the omniscient Brisbane's remarks so far as they concern everything but chemistry. Apparently, omniscient as he is, the great Brisbane overlooked the criterion established by Albert Edward Wiggam which defined the recognition of expert knowledge as one of the marks of an educated man. After calling attention to the fact that osteopaths were celebrating a "normal spine week," the omniscient one proceeded:

Osteopaths today take the place of doctors and doctors cannot do what osteopaths do, because they haven't learned that in the human body the skeleton is as important as the steel frame in a skyscraper. It is as dangerous to have a bone pinching a nerve as it would be to have an iron beam cutting off an electric light wire, or a water pipe. Mayor Walker, of New York, on his way west for a rest from overwork, stopped in Chicago for an osteopathic treatment. Wise mayor.

Shortly after this was published the Hearst papers announced that Mr. Brisbane did not intend to say that osteopaths take the place of doctors. Even if he had said that, however, the item would have been little better. The analogy between pinching the nerve and an occluded water pipe is a typical Brisbane analogy. He makes science so simple that his comments appeal particularly to the simple-minded. Let us see what the dispenser of what have kindly been called "Brisbanalities" does with a matter of medical news! Here is an example:

Tears are deadly to germs, says an English scientist. One tear in a test tube with millions of bacteria dissolved them all. Nature has many ways of protecting the body. There is

FADS AND QUACKERY IN HEALING

salt in tears, and salt is one of the greatest protectors. Salt, acid, and violent shaking are deadly to germs. When you sneeze you kill germs, just as you would be killed if an elephant stepped on you.

There is a specimen of a complete Brisbanism. First, the statement of an unspecified English scientist, that one tear dissolves a million germs, absolutely untrue; next, the information that salt is one of the greatest protectors of the body against germs, also untrue; and then the alarming comparison of a sneeze to an elephant. That is the real Brisbane touch.

Again Mr. Brisbane writes:

Science is powerful. It can help you if you will let it. Keep away from quacks of all kinds, including quacks that think they can cure you by talking to you about it—unless the latter makes you cheerful.

Next to X-rays and the surgeon's knife comes cheerfulness. The energy of the blood destroys cancer in many cases. Cheerfulness increases blood energy.

There you see how by pure logic, Mr. Brisbane leads us to the cause and cure of cancer, sought unsuccessfully as yet by scientists for many years.

And in another issue:

A very long needle is used to inject adrenalin right into the heart. The adrenalin, made from one of the mysterious glands of the body located in the pancreas, is injected into the tissues of the heart itself.

Adrenalin, Mr. Brisbane should have discovered, comes from the adrenal gland just above the kidney, and has nothing to do with the pancreas in the matter of its origin.

Commenting on the death of President Harding, the inspired one said:

When you hear that a well-known man is ill, observe the doctors and how they feed him. Many a man dies because

MEDICINE AND THE PRESS

doctors don't know enough to take food from a man fighting high temperature.

For your own sake, remember that the body cannot eliminate poisons and assimilate nourishment at the same time. Elimination and assimilation don't go together.

While your temperature is above normal, take nothing but water—plenty of it—and your temperature will come down probably.

But Mr. Brisbane never hesitates. Here Arthur takes it for granted that a Mongolian idiot has something to do with Chinese parents—but it has not:

Question any experienced obstetrician as to occasional births of "Mongolian idiots" in his practice, and you learn that Asiatic blood is never completely absorbed by whites.

The Mongolian idiot appears frequently in Italy, both parents apparently white, and scientists trace the appearance to the importation of Mongolian slaves as far back as Marco Polo, in the thirteenth century.

The omniscient Arthur in a generous mood offers advice to King George's physicians who apparently have been overlooking something in the way of helping His Majesty. The item from the New York *American*, and from all the rest of the syndicate papers:

King George's condition worries his doctors, puzzled by his "great fatigue."

The King's blood is tired after months of fighting against poisonous streptococci.

His blood has lost what military commanders would call its fighting morale.

After a long campaign a tired army needs fresh soldiers. The King's blood needs vigorous, fresh leucocytes, and could get them by transfusion. That so important a step should be so long delayed is surprising. The King's physicians might well hesitate to experiment with so illustrious a patient. But blood transfusion is no longer an experiment, but a scientific remedy for blood stream infection.

So next Mr. Brisbane discusses surgery of the brain. Possibly ten other men in our country really know something about it:

At the base of the brain lies the pituitary gland, a puzzle to scientists, thought by some to be the residence of the human soul.

Dr. F. J. Evans of Denver has successfully removed a small tumor, near the pituitary gland, from the brain of a child four years old.

One-half the skull was removed on one side, one lobe of the brain lifted, while the surgeon worked through brain tissue. A fine achievement. . . . One day such operations will be as common as pruning trees. It is probable that ninety men in a hundred, at least, could be made mentally more efficient by brain surgery, especially removing pressure of the skull and giving important parts of the brain more room. . . . Put your hand on top of your head. Run it along the top lightly. If you feel a depression at the top you need brain surgery to lift the skull top a little and let the brain do better work. Some doctors will say this is nonsense, but that is what all doctors past forty said when Harvey announced the circulation of the blood, driven by the heart.

It seems that alcoholic wines are different from other alcoholic beverages:

Mussolini forbids intoxication which means more in Italy than forty constitutional amendments would mean here. But Mussolini allows his Legislature to decide that the mild and rare drunkenness caused by drinking natural Italian wines, does not count. Only hard liquor drunkenness is to be punished.

To prohibition that seems absurd, but it is not quite absurd scientifically. Natural wines, no matter how much you drink, DO NOT PRODUCE DELIRIUM TREMENS.

Champagne, of course, is not included among natural wines and is about as bad as whisky with the additional disadvantage of completing the process of fermentation in your stomach.

MEDICINE AND THE PRESS

"Never feed a fever," says the great maestro:

Secretary Good's relapse, coming after optimistic reports from his doctors, reminds you that NO FOOD should be the rule in cases of fever indicating a toxic condition.

Secretary Good's temperature was high, his body was fighting desperately against poison, and eliminating it.

"Then," you read, "he took nourishment for the first time."

He took nourishment, and immediately his condition changed for the worse. It did so inevitably. The body cannot, at the same time, absorb nourishment and eliminate poison.

One task is enough, for a man low in strength.

Doubtless the usual course was followed. The patient is feeling a little better. Those that love him are distressed because he has had no food for several days.

Food is given, when it should be sternly withheld, and the relapse comes, the unnecessary and very hard work of digestion and food assimilation having been added to a body already overworked.

Doctors, too often, yield to family anxiety, based on the foolish belief that a man, fighting poison in his blood, needs food "to keep up his strength." He needs water, rest, quiet. Food is only more poison, and many that call themselves doctors do not know it.

Any man in average condition can live on water for twenty days or more, without serious injury. Remember that, if some one tries to feed you, when you have high fever, or any indication of a septic condition.

There is danger, it seems, in looking too closely at cocktails:

Professor Guillain, of the University of Paris, says, truly, that more people kill themselves with cocktails than with pistols, shotguns, knives, gas, and poison.

That France and Britain should have copied our worst form of alcoholic poison, says little for their intelligence, but in both countries, only the worthless froth of the population drinks the mucous-membrane and kidney destroyers.

FADS AND QUACKERY IN HEALING

Dip your handkerchief in a cocktail, apply it to your eyeball, and you will know what a cocktail does to the lining of your insides.

If French and British cocktails shorten life, made with real spirits, ask yourself what bootleg liquor must do to the American interior.

Arthur now begins to cogitate on the facts of life:

The women's air race from the Pacific Ocean to Cleveland was saddened by the death of Miss Marvel Crosson, a courageous and admirable young woman.

For the present such races should be confined to men. Their death is less important.

When such a woman as Miss Crosson is killed, there is no knowing what brilliantly useful men and women may, in her death, have been deprived of their chance of life.

Of course, there was the immaculate conception:

A New York court sets free individuals arrested on a charge of teaching birth control. That was not the "set-up" when the people were arrested. But public opinion caused a change.

Temporarily it is decided that the woman, not some gentlemen with theories, may decide how many children the woman shall have.

The idea that God wants a sickly woman with six or seven sickly children to have another sickly child isn't complimentary to divine wisdom. Besides, all the birth control in the world could not prevent it if the Lord willed it. He is omnipotent.

Sugar, it seems, makes heat but not fat:

This country, once the great sugar-consuming nation of the world, now eats less sugar than it needs, A GREAT DEAL LESS, as shown in the investigation ordered by Earl D. Babst, head of the American Sugar Refining Company. Sugar is necessary to health. Nations insufficiently supplied

MEDICINE AND THE PRESS

with sugar, as was shown in the big war, are nations partly starved.

Australia uses, per capita, eighteen pounds of sugar more than the United States, and New Zealand uses fifteen pounds a year more than the United States.

This is due in part to the folly of women trying to get thin, told by ignorant specialists, "Sugar will make you fat."

Sugar will NOT make you fat. On the contrary, it will supply heat and burn up waste tissue.

So it seems also that sunshine prevents cancer, which is just Mr. Brisbane's notion:

Proof that the complete costume of modern woman, including dress, stockings, shoes, and underwear, may weigh as little as 24 ounces causes the virtuous to grieve. But, even as woman in her changing moods cuts off her dress at top and bottom, may be comfortable. The low-necked dress is partially justified by this fact, to which your doctor will testify. Cancer attacks women more often than men, and cancer of the breast, dreadfully frequent in civilized countries, is quite unknown among female savages that wear no clothing above the waist. Sunshine seems to keep cancer away.

Not only diagnosis, but prognosis and treatment comes from the noted specialist:

Mussolini, as was surmised, is suffering from ulcers in the duodenum, the short intestine, into which the stomach opens. That can be cured if the walls of the intestine have not been eaten through.

*Ten days' fasting and a good course of saline cathartics will discourage and clear out the *Llambia bacilli*. Half a pint of sour milk, soured with the *Metchnikoff bacillus*, plus careful living, will do the work and keep things right.*

The hemorrhages in Mussolini's case are the dangerous signs. A disease like his killed Napoleon at St. Helena. But in Napoleon's case depression and despair did half the work. Mussolini has many interesting things to live for, and probably will live.

FADS AND QUACKERY IN HEALING

So then he takes up locomotor ataxia and forgets about its syphilitic cause:

You can tell the age of fishes by the size of their ears. The fish has an interior ear; although you can't see it, it is there. In that ear grows a little "otolith" like a small, round stone. Rolling around the ear cavity this stone, by its feeling, tells the fish whether he is swimming right side up or on his back. Strange idea, you say, the same is true of man. We have inside the ear structure, a minute quantity of liquid which, as it moves back and forth like the "spirit" in a mechanic's level enables us to keep our balance with our eyes shut. Locomotor ataxia destroys that fluid, and its victims fall over when they shut their eyes, and they must look at their feet, as they walk.

We are all "fearfully and wonderfully made"—fish, men, mice and microbes.

And dietetics is his specialty!

Chicago's campaign to increase consumption of beef is useful. Human beings need meat, as a time-saving proposition.

Millions of years of frost and rain grind up rock, earth-worms prepare soil, grass grows, cows eat it, men eat the cows, and get in half an hour the benefit of work done by the cows, worms and nature.

There ought to be another campaign to encourage the use of mutton. For all but the strongest men mutton is better food than beef. For children especially, mutton is better, being a less "nervous" food.

And again Arthur solves the problem of cancer. Just—

Don't die of cancer, it isn't necessary. At the age of 40 one out of every ten persons has a cancer. One hundred thousand die of cancer in the United States every year. At least 75,000 die unnecessarily. Autopsies show that thousands, dead of old age, take cancers to the grave with them. Pay attention to any strange growth on the body. A little work will often prevent a cancer spreading. Above all, keep in

MEDICINE AND THE PRESS

good condition, with regular sleep, moderate exercise, much fresh air and your blood will take care of the cancer.

The vitamins, ah! the vitamins!

What are vitamins? We know that we can't live without them, that they cure rickets in children, what foodstuffs contain the various vitamins, and scientists have just discovered that two of them, vitamins A and B, give off some kind of strange radiation. Rats deprived of certain necessary vitamins, have no children. Deprived of other vitamins, they starve to death, although supplied with abundance of food.

Three important things we possess, without knowing what they are, electricity, vitamins, and the soul of man.

And occasionally Arthur lapses in his grammar, as he tells what happened to Eastern visitors in the Golden West:

Westerners live cheerfully under conditions that would appall some in the East.

While fishing on the Klamath River, Mr. Clark stopped with an old farming couple, 100 miles from a railroad. They had ten cows and sold \$700 worth of milk a year. Visiting tourists yielded about half as much as the ten cows.

And then he expresses himself further on cancer:

Dr. Boris Sokoloff of St. Louis proves to the Pasteur Institute in Paris that lactic acid can be useful against cancer.

Twenty-seven per cent of cancerous rats were completely cured by injections of lactic acid and cancerous growth arrested in the remaining 73 per cent.

The value of lactic acid and the energetic lactic bacilli is not fully appreciated. Doctors should experiment with the introduction of lactic bacilli directly into the lower, intestinal tract, instead of relying on the bacilli to find their way safely through the destructive juices of the stomach, into the duodenum and onwards.

Thus Doctor Brisbane! Needless to say much of his advice is unscientific and absolutely pernicious. But every day hundreds of thousands read his disquisitions on everything from

FADS AND QUACKERY IN HEALING

the Dempsey-Firpo fight to the Einstein theory and accept them as gospel truth. I do not know what his batting average may be in other fields. In medicine, he seems to average one correct hit in about twenty trips to the plate.

MEDICAL ADVERTISING AND PROPAGANDA

"You manufacture, with the aid of unguents, a false head of hair, and your bald and dirty skull is covered with dyed locks. There is no need to have a hairdresser for your head. A sponge, Phoebus, would do the business better."—Martial: Epigrams, Book VI, Ep. 48.

ONLY a little more than a century has passed since the time when the simple announcement that a piece of goods was for sale at a certain price sufficed to make it known to the purchasing public. Today, the sale of most commodities, luxuries, and services is the result of a highly organized, intricate campaign. Our thoughts, our beliefs, our food, our clothing, our pleasures, and our government are controlled by propaganda. The word, originally of wholly evil connotation, now represents all of the various forces that may be brought to bear to influence public opinion. Five years ago, Mr. Bruce Barton, who did so much to popularize the Bible, at least briefly, said to me in a conference in New York: "The medical profession has the greatest message to deliver for the good of mankind, and it is the one group which has failed to avail itself of the power of advertising for promoting that good." I tried to convince Mr. Barton that the medical profession had done more than its share in the way of philanthropy and that education of the public in health by means of paid advertisements was the duty of the state, of the press, and of industries generally. Mr. Barton's main business is not religion but advertising—he is a great author-

FADS AND QUACKERY IN HEALING

ity in the field of propaganda, and I fear I left him unconvinced.

As early as 1843 a leader in the field of advertising noted that pain or the fear of pain had the greatest appeal to mankind, and that for this reason medical advertising, including the announcements of patent medicines, took most of the space in the press. He pointed out also that vanity had psychologically the next strongest appeal and that the advertisements of beauty products followed closely after those of medicines and doctors in their ability to command public interest. With the beginning of the Twentieth Century and with the introduction of modern propaganda, conditions changed. The coming of anesthetics and of modern medical science, the education of the public as to the fallacies of patent medicine advertisements, the development of something in the nature of ethical standards for the press, and, above all, the recognition that propaganda could change the habits of thought, of action, and of living of a nation, have worked tremendous changes.

Propaganda—the word is of ancient lineage, going back to the first great Catholic Board for propagating the Faith—today includes all that was included in its earlier meaning, rather than paid advertising alone. Of the methods used more will be told later. However, in a country noted for commercial efficiency, the direct advertising methods have been developed far beyond the methods of insidious propaganda. Advertising today commands the highest priced writers and artists; its directors are the very molochs of commerce; it speaks and the whole world listens.

THE COST OF ADVERTISING

Today the advertising expenditure in the United States totals approximately \$1,502,000,000, of a total national expenditure of ninety billions. This figure represents about one-half as much money as is spent annually for preventive medicine and the care of disease. Of the money distributed for advertising, the newspapers in 1927 took \$690,000,000; direct-by-mail appeals, \$400,000,000; magazines, \$210,000,-

ooo; billboards and outdoor advertising, \$75,000,000; business and trade papers, \$75,000,000; premiums, programs directories, and similar places of advertisement, \$25,000,000; streetcar cards, \$20,000,000; and the radio, just in its infancy, \$7,000,000. The materials most widely advertised in the period from 1922 to 1927 were automobiles, toilet articles, foods, beverages, and tobacco. In 1927 these constituted 65 per cent of the total national advertising in newspapers in forty-nine large cities. Foods, toilet goods, household goods, automobiles, and accessories accounted for 51.3 per cent of all magazine advertising in 1927. The rapid growth of the radio business and of the electrical refrigerator business was stimulated by the heaviest expenditures for advertising ever made by any investments. The manufacture for which the greatest increases in advertising took place from 1921 to 1927 were radio sets, electric refrigerators, automobile equipment, foods, toilet articles, silverware, clocks, and watches. The sale of such goods is proportionate to the amount of money spent in propaganda and advertising.

The entire nature of the life of the American people has been modified by the appeals made through propaganda. Consider, for instance, food and clothing. A human being cannot possibly eat much more than 3,500 calories day after day. It is possible for most of us to maintain our weight satisfactorily under ordinary conditions with well under 3,000 calories. When more money becomes available for food, one does not buy more food but begins to vary the nature of the products that are taken. As a result of the fact that the American people had more money to spend for food during the past five years, through the development by experts in chemistry and nutrition of new types of food, and because vast sums were spent in exploiting foods, a great change has come in the diet of our people. Package foods have multiplied in number and in variety. The farina, whole wheat, and oatmeal of a past generation now come to us in hundreds of forms—mixed, inflated with air, shot from a cannon, half-cooked, wholly cooked, irradiated, twisted, straightened, and modified indeed in every possible way to

afford novelty to the sensation of taste, to the feel upon the tongue, to the sense of smell, to sight, and to hearing. Actually every factor has been studied that might possibly make for increased appeal to the epicure. For this the American people pay and pay heavily, and a large part of what they pay goes to the advertising that promotes these foods to the purchaser. Today the average man eats about one thousand calories less per day than he used to eat. He pays more for it. These changes have caused consternation in many great industries which now undertake propaganda to overcome them. The subject might be carried further to show how the package goods developed the chain store and vice versa but this would carry us far afield.

CLOTHING AND PROPAGANDA

The clothing of men and of women has changed considerably in the past ten years. Changes in fashion are not extraordinary, and great tomes have been written describing modifications in human wear from generation to generation. The last ten years have seen, however, some of the most remarkable changes in fashion that ever afflicted humankind. The results of these changes have been such as to shake to their foundations some of our greatest industries. It has been said that Americans will not raise anything but cotton and will wear anything else. Early in the present decade, furs and fur-trimmed garments and short skirts became the vogue. The coming of the short skirt demanded silk hosiery. At the same time, the shoe trade began to develop novelty styles, and fashion decreed that shoes must match the dress. Rayon silk, which had formerly been merely a curiosity, became the established material for underwear. In 1926, 36 per cent of the sales of women's underwear, including vests, bloomers, step-ins, union suits, slips, nightgowns, and other garments more or less unmentionable, were made of rayon; 31 per cent of silk, and 33 per cent of cotton. As a result, there occurred a tremendous depression in the woolen and worsted industries, and the manufacturers of cotton stock-

ings went into bankruptcy. For this propaganda was responsible, and the connection has been traced directly.

A few years ago, the producers of velvet were faced by a tremendous depression in the use of that material. A conference was held, and it was determined to spend money for propaganda. Agents were sent to Lyons where silk is manufactured and to Paris, where the celebrated designers were informed of the situation and suitably dealt with. As a result, Worth and designers of equal fame began to develop gowns, cloaks, and other feminine accessories of velvet as the mode for the coming season. The wife of the President of the United States suddenly appeared in a velvet hat. This fact was widely commented on in the press. Newspaper articles began to appear on the women's pages announcing that fickle fashion had changed to velvet. The manufacturers of chopped or ready-made dresses who copy the Paris fashions began ordering thousands of bolts of velvet. The shop girls, clerks, and all of the group known as the lower middle class began to buy velvet gowns for evening wear and even for day time. The velvet business increased tremendously, and the depression was temporarily allayed.

THE CRAZE FOR SLENDERIZATION

A few years ago a craze for slenderization swept the United States. The corset industry was ruined. A manufacturer who developed boyish form brassieres made millions and expanded his factories to meet the demand. The producers of white flour and sugar felt the depression. In several large cities, hygienists noted that the rate of tuberculosis for adolescent girls and for young women began to increase. Here is a disease definitely associated with malnutrition. The response was prompt. Again propaganda was brought into the picture to influence public psychology. The Paris designers who had decreed lean models, short skirts, and a modicum of trimming were prevailed on to decree hips, trains, and ruffles for the future mode. The manufacturers of white flour and of sugar began purchasing space in the press for their advertisements. Great publicity organizations

were designed to promote education through news columns, editorials, lectures, motion pictures, and the radio. Mr. Ziegfeld picked larger girls for his chorus and covered them up. Today the trend is toward bigger and better women, and toward women more fully clothed. Immediately other industries depending on leanness began to be depressed and to build propaganda to save themselves. One of the steps in the reverse propaganda was the promotion of the Hollywood diets. A critic of movies, Luella Parsons, first promoted these diets as having been developed for the movie colony by a congress of celebrated French and American physicians. This obviously was pure bunkum. Somewhere the word emanated that the diet had been developed by a famous medical clinic. The "Eighteen-Day Diet" was given tremendous vogue because the Hollywood standard of beauty in women is the American standard of beauty, and fat girls do not photograph well. The artists of Hollywood, if one may call them such, wage constant battles against avoirdupois. The "Eighteen-Day Diet" began its day. Then the producers of package foods, of sugar, and of flour again felt a depression in their trade. The evidence indicates that pressure was brought to bear on the powers that be in journalism. The advertisements of the food industries, as has been pointed out, represent one of the largest groups carried in the press and in the magazines. Suddenly, all of the papers began to carry articles by the experts on how to gain weight rapidly, and another depression was delayed.

HALITOSIS AND DYSKINESIA

Increased education of the public as to the facts of physiology, anatomy, and hygiene has not disposed wholly of the old psychology. Among the chief appeals that may be made to mankind through advertising, the appeals to relief from pain and the promotion of health, and the appeal to vanity or the promotion of beauty still loom largely. Thus, the physician and particularly the hygienist and the dermatologist have become prophets in the land. The promoters of yeast, unable to find in this country physicians who would

give testimonials, were able to purchase them from British, Spanish, French, and German colleagues at about \$150 each, the money in many instances going to some charity which the physician desired to aid. Perhaps much of this goes back to the original inspiration that came to Feasley when he found the word "halitosis" and made a million dollars in a season for the Listerine company. Immediately the bright boys of the advertising agencies began thumbing the lexicons in search of new words to charm the public fancy. The Metropolitan Life Insurance Company launched "dyskinnesia" as a safe word for constipation; a yeast concern, over the drawing of a pallid, haggard citizen, said, "Just making the motions—a victim of cachexia (run-down condition)." Dr. Sansum discovered acidosis for the orange growers, and Listerine, having worn threadbare the sad tale of the wall-flower—"Why wasn't she dancing?"—discovered seborrheic dermatitis.

In support of advertising claims, millions of dollars are being spent in research. In a recent visit to the Mellon Institute I saw experiments being conducted to support ventilating devices, mattresses, bed springs, gelatin, bran foods, and what not. The scientific appeals appeared in the advertisements of 1930. Thus modern advertising is scientifically grounded and most of the great campaigns of the current years have been studied by experts who have not been slow to ask for the evidence on which the campaign was based. Honesty in advertising has become a national slogan and better business bureaus throughout the land enforce the standards.

In the observations thus far set forth, I believe it has been shown that advertising is doing as much or more to educate our public than the public schools. But our public schools are, themselves, constantly swayed by propaganda! Practically no one who has looked into the situation fails to realize that the present era of prohibition is the direct out-growth of textbooks loaded with propaganda under the guise of science which pervaded our schools in the latter part of the nineteenth century. Not long ago the American Medical

Association was besought by a propaganda bureau against narcotics to urge the insertion into all the current textbooks of statements which would no doubt result in the abolishing of the right of the physician to prescribe morphine or cocaine fifty years hence. The political censorship of textbooks is not a strange phenomenon. Politics recognizes the importance of propaganda and wins elections with it. In the campaign of 1916 Henry Ford advertised under the caption "Humanity and Your Vote" the reasons that led him to support President Wilson. The announcement appeared simultaneously in five hundred newspapers in all parts of the country. That was at the time when Irving Berlin wrote "I Didn't Raise My Boy to Be a Soldier," which was followed shortly after, when the United States entered the war, by that other peaceful melody, "Oh, How I Hate to Get Up in the Morning," and also by "Over There."

Obviously scarcely a single field of human thought or action has not been entered by the advertiser. Today the advertisement is used as much or more to influence public opinion as to sell commodities or luxuries. The advertisement, rather than the editorial, is the most effective means of persuading the public to any course of action. Already the advertisement dominates our scenery, our literature, our entertainment. The beauties of scenery are defaced by miles of billboards; on the tallest rocks appear the slogans; stories are written longer so that they will run over among the advertisements, and it has been suggested that the time will come when writers will insist on being next to good advertising matter, just as advertisers now insist on being next to pure reading matter. On the radio a Beethoven concerto is devoted to promoting somebody's oil burner, and a lecture on evolution is sandwiched between the claims for a health drink and a cold cure. Children are more familiar with the Gold Dust Twins, the Campbell Kids, the Victor Dog, the Carnation Contented Cow, the Borden Eagle, the Bull Durham and the Camel of the cigaret than with Little Lord Fauntleroy and Black Beauty. There is an anecdote of the prayer of a modern little girl. "Oh, Lord, make me pure,"

MEDICAL ADVERTISING AND PROPAGANDA

she said. "Not 99.44% pure like Ivory Soap, but absolutely pure like Royal Baking Powder."

Thus propaganda has pervaded politics, government, education, art, and science. Social service and charity, today organized virtually as big business, do not hesitate to avail themselves of propaganda in the business of doing good. A great portion of the funds accumulated for charity and for philanthropy is paid out to the newspapers and magazines for advertisements planned to raise more money. The managers have found that the advertisements get results that cannot be had in the modern state of our civilization in any other way. The churches, deserted because of the more sagacious appeals of the movies, the golf courses, and the baseball games, buy advertising space to attract the faithful. Newspapers, anxious to sell space, arrange for public-spirited citizens who like to see their names in print, to pay for these advertisements in the promotion of good.

A study of advertisements is the best route to follow in tracing the history of any of the human activities during the last twenty-five years. A quarter of a century ago *The Journal of the American Medical Association* showed that the vast majority of the products advertised were drugs; then came books, then apparatus, and finally foods. Today foods equal, if not surpass, drugs in the amount of space sold, and books follow closely thereafter. The years see the gradual introduction of new devices for accurate measurement, of mediums for the growth of bacteria; they see the rise and fall of the vaccine; the coming of radium and of the ultraviolet ray; they see the appearance of insulin, of liver extract, of arsphenamine, and of scarlet fever antitoxin. If you would see the real, enduring progress of medicine during the past twenty-five years, study the advertisements. It is simpler than surveying the original contributions.

ADVERTISING HEALTH

While propaganda has overwhelmed every other phase of human life, its application to spreading the benefits of scientific medicine has been slow—and no doubt much to

the advantage of the practice of medicine. True, the American Society for the Control of Cancer, the National Tuberculosis Association, the American Child Health Association, the National Health Council, the American Heart Association, and innumerable similar organizations are devoted to propaganda. However, compared to the type of effort and the results achieved in the field of commerce, the best of their work is amateurish. They simply do not have the funds to purchase advertising space or efficient propaganda in quantities sufficient to make their voices heard among the shouting for public attention. They seek free time on the radio, free space in the press, free public speakers. Wherever social effort turns in its propaganda, it finds itself in conflict with the interests. Consider the difficulties of the editor of a newspaper when he surveys the publicity material that comes to him. Thus Salmon points out in "The Newspaper and the Historian":

The press has a free hand in some of its campaigns for public health—flies, rats, mosquitoes, and caterpillars are not commercialized and campaigns against them are universally popular. But the press suffers a heavy handicap when it attempts to improve other conditions that militate against the health of the public. Efforts to secure pure milk may run counter to milk dealers and to the Grange; proposals to improve the water supply come into collision with the taxpayers; epidemics must not be reported because they reflect on the boards of health and diminish the out-of-town trade; news of the bubonic plague must be suppressed because its publication will interfere with travel; disgraceful living conditions in congested districts must be ignored because the tenement houses are the property of wealthy residents; the results of accidents must be minimized because they reflect on the railroads, or on important local manufacturing industries, or on the large department store; danger from fire in buildings where many persons are employed must not be dwelt upon because the owners are influential citizens; advertisements of patent cure-alls must not be rejected because they make widely known the home town where they are manufactured; a clean-up week must not be urged

MEDICAL ADVERTISING AND PROPAGANDA

because it is opposed by the board of public works; exposure of filthy conditions behind the scenes in restaurants will result in boycotting the restaurants by the public and in boycotting the exposing newspapers by the restaurants; advocacy of free clinics may incur the displeasure of the medical profession; the premature announcement of discoveries in medicine or in surgery may bring only ridicule on a paper overzealous to publish.

In all of this discussion, I have not been so naïve as to imagine that individual physicians, individual clinics, individual universities, and other medical and scientific organizations have failed to realize the value of propaganda for promotion. At the beginning of the twentieth century, a noted surgeon began to appear regularly in the press in publicity relative to his surgical accomplishments. He admitted shortly before his death that ninety per cent of his practice came to him directly from the public as a result of such exploitation. Another surgeon, having been induced by proper representatives to discontinue his direct contacts with publicity, admitted shortly thereafter that the effect on his practice had been prompt in its depression.

ADVERTISING AND PRACTICE

A great clinic, if properly organized, must have its publicity department. Representatives of the clinic must appear regularly at all important medical meetings, to read papers on investigations. Motion pictures revealing the work of the clinic must be sent broadcast to the meetings of county medical societies. Interviews with the leaders must be given freely, and they must cultivate a journalistic sense so as to make statements sufficiently fantastic to catch the first page and sufficiently scientific to avoid too great condemnation by medical colleagues. The discoveries made by the research workers who are contentedly toiling in their cubbyholes must be acclaimed and exploited by the "contact men" as they travel about throughout the land. In this way, the name of any clinic may be brought prominently to the people. I say "may be"; perhaps I should say "has been!"

No one realizes better than I, however, how wholly inefficient from the commercial or professional advertising man's point of view has been the propaganda for scientific medicine and particularly for the individual practicing physician. Let us assume that a really dynamic public relations counsel—for such is the title of a great authority on propaganda—were employed by organized medicine to present to the public the ability of the family physician to diagnose and treat rheumatism. The public, we will assume, is not especially interested in either rheumatism or physicians.

PROMOTING RHEUMATIC CURES

Rheumatism, or inflammation of the joints, or pain in the back or muscles, which is the popular conception of the term, is a common, painful disease. The condition is chronic, and as with most chronic disorders, patients are eternally hopeful. Remissions occur and patients are likely to feel that each new treatment is bringing relief. Indeed, the chiropractors, osteopaths, faith healers, and others who depend largely on the power of suggestion, can, for these reasons, cite their quota of benefited and cured cases and produce the testimonials to substantiate the citations. Let us assume that the organized medical profession wished to increase greatly the practice of the individual physician, particularly as relates to the treatment of rheumatism, and devoted a sufficient sum of money to propaganda for that purpose.

Various leaders of the profession would prepare articles for the press calling attention to the menace of rheumatism and emphasizing its frequency and painful character. Some twenty or thirty syndicated health columnists would be asked to coöperate by devoting their columns to a similar purpose. Syndicated editorial writers would be visited, provided with the facts, and urged to awaken their readers. The matter would be discussed with the business departments and then with the editorial departments of leading weeklies and women's magazines. Interviews would be secured with Henry Ford, Jimmie Walker, Bishop Manning, and others of similar

repute who speak promptly, if not authoritatively, on most of the affairs of mankind. Arthur Brisbane would be asked to discuss the relationship of rheumatism to the Pharaohs of Egypt and he would emphasize that rheumatism is a menace to mothers—and who has not had a mother? The Associated and the United Press would circulate the interviews to the most remote hamlets and townships. Everyone would remember remote twinges of pain and would be flattered to think that he was suffering with the disturbance that had aroused the interest of Mr. Ford and Mr. Brisbane.

Publicity organizations which devote their entire efforts to securing publicity for various movements would begin their work. News items about cases of rheumatism among noted and notorious people would be furnished to editors and they would assemble them in special columns so that rheumatism would loom much larger in the public eye than it actually is. The procedure was followed by our editors last year in connection with juvenile suicides, and is regularly followed in connection with motor accidents. The Sunday magazine sections would appear with lurid pictures and highly adjectived articles about the manner in which rheumatism caused the downfall of Grecian and Roman civilizations. Mr. Irving Berlin would produce a song called the "rheumatic blues," which jazz orchestras would feature on the radio. Victrola records would appear overnight. Dances would appear in the Scandals and in the Follies, and when the girls stood on their heads and the skirts toppled downwards it would be discovered that they spelled "rheumatism." A movie called *Her Dangerous Love* would reveal a woman who sacrificed her life for a man with rheumatism. Red Grange would explain how rheumatism has interfered with his success since leaving Illinois. Noted ladies like "Peaches" Browning and Fanny Ward would be photographed with their skirts raised sufficiently to reveal the locus of rheumatism in the knee joint and an arrow would point to the spot of inflammation. The manufacturers of drugs for the relief of pain, of ointments used as counterirritants, of hydrotherapeutic devices, of heat lamps, and of diathermic apparatus would buy space in

which rheumatism would be fully discussed. Gradually the interest and the fear of rheumatism would accumulate. Then billboards and streetcar cards would shout rheumatism on every side, and sky writers would point the word in the heavens.

At last the American people would be "rheumatism-conscious." The organized medical profession, having held its own connection with the campaign secret until the psychological moment had arrived, would launch its advertisements. Full pages would be taken in the press to emphasize the main points that had been brought out in the preliminary campaign, and the public would be urged to go to the places listed where, for a certain price at a certain time, a proper diagnosis and treatment could be had. Certainly they would flock by thousands, for propaganda never fails unless it conflicts with fundamental human instincts. Even with these it can be temporarily successful.

The campaign described has been purposely exaggerated, but for every item or step that has been mentioned adequate evidence can be produced to reveal its use in some campaign already before the American public. By such methods Madame Helena Rubinstein took a pot of cold cream, made according to the formula of a Polish physician, and ran it into millions of dollars. Her subject was beauty and she had something definite to sell.

Furthermore, the example itself is not such a bad selection for a propaganda, if one should really be made. Rheumatism must have competent diagnosis and differential diagnosis. In Vienna, because of the importance of the problem of rheumatism, three great centers for rheumatic patients have been established in the three largest hospitals coöperating with the *Krankenkassen*. In the outpatient departments attending to patients for the *Krankenkassen*, extensive physical therapeutic departments have been installed. At all the great spas and resorts the *Krankenkassen* have established special departments for the care of rheumatism. In England one sixth of the disability of workmen is found to be due to rheumatic disease which costs annually about ten millions each year in

sick benefits and the loss of eighteen million working days per year. For Berlin it was estimated that the number of rheumatic patients who are members of the *Krankenkassen* is seven and one-half times as large as the number of tuberculous patients. Nevertheless, the propaganda against tuberculosis is tremendous; the money spent in study and education concerning tuberculosis is in millions as contrasted with paltry thousands devoted to rheumatism. But shall we have a similar propaganda concerning every disease?

In a survey of the trend of medical practice I emphasized my belief that the care of public health in the mass was the duty of the public health officials, and that preventive medicine as applied to the individual must remain the work of the individual physician, if the latter is to survive for the future. Thus one of the chief duties of the public health official will become the making of suitable propaganda for the scientific practice of medicine and the devotion of public funds to this purpose. It is encouraging to see the health officer of New York advertising the prevention of diphtheria by toxin-antitoxin and to see the buses on Fifth Avenue carrying signs urging the people to go to their family physicians for this service. It is encouraging to see seven great philanthropic organizations in New York coöperating to advertise in the *New York Times*, urging people to go to their family physician for periodic physical examinations. It is encouraging to see the great pharmaceutical houses educating the public regarding the progress of preventive medicine and urging the people to go to their family physicians for advice and the application of established methods. Thus scientific medicine is being helped by propaganda. The propaganda is powerful, efficient, and costly, and the physicians are not being asked to devote their own funds to purchase advertising space primarily for the good of the public.

There exists among the public, the advertising agencies, and the press generally a strange notion as to the principles of medical ethics and their application to advertising. The Principles of Medical Ethics say wisely:

It is unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement or by furnishing or inspiring newspapers or magazine comments concerning cases in which the physician has been or is concerned. All other like self-laudations defy the traditions and lower the tone of the profession and so are intolerable.

Here is nothing which will prevent a county medical society from engaging in group advertising to warn the people away from cultists, to educate the public as to the advantages of scientific medicine and the dangers of one-track systems of healing. Great advertising agencies, urging such advertisements on county societies—and many county, as well as a few State societies, have purchased space for such purposes—point out that cultist groups, including osteopaths, magnetic belt promoters, and even Christian Scientists, take space in the newspapers to promote their wares. The Christian Science Committee on Publications is no doubt the most efficient organization ever developed to combat unfavorable publicity. Until the present year, it has fought an almost invariably successful battle. The fallacy of the advertising agencies' argument should be obvious. If the advertising of the cultist is unscientific and against the best interests of the community, the cure for the situation is for the newspapers to refuse their advertising, not for the medical profession to combat the advertising by buying space in opposition. The medical profession should not give up its principles; the advertising agencies and mediums should acquire more principles.

Propaganda for anything will succeed temporarily, but if it is opposed to fundamental human instincts or if it is untrue the facts become known and the repercussions are serious. In all the campaigns for carrying preventive medicine to the public which we in the headquarters of the American Medical Association have supervised, we have insisted on limitation to those methods which were fully established as efficient and harmless. The results have been favorable and there have been no serious repercussions.

Propaganda is a most potent force, used today to control practically every phase of human thought and action. Medicine has but trifled in its employment, whereas the possibilities of more extensive and proper use of established technics might yield great good to the advancement of medical science, the good of the medical practitioner, and, above all, the health of the public. The philanthropies in the field of medicine, the corporations engaging in medical practice, are using propaganda far more efficiently than it is used by organized medicine. Indeed, the old inhibitions are strong, and organized medicine has not yet determined how far it wishes to go in opposing unsound propaganda in the field of social medicine with its own point of view. The choice must nevertheless be made. The opinion of the public is being established for it by teachers who have studied the situation and who realize how the opinion of the public is formed. If the medical profession is to have any part in controlling public opinion, it must accommodate itself to the situation and use the forces that are being mustered by the opposition. Through the publication of its own health magazine, through its contacts with the press, through its association with the great commercial interests allied to medical practice, through coöperation with many social services and philanthropies of high leadership, organized medicine is beginning to avail itself of the powers of propaganda for its own and for the public good. But the situation demands far more consideration by organized medicine than it has yet had.

PSYCHOANALYTICAL CHARLATANS

"Every doctor must have human understanding but the psychotherapist needs it to an unusual degree and besides this he must be a natural leader. For in this realm the relationship between doctor and patient is particularly close. In this condition the patient is particularly lonely, frightened and weak and needs a strong guide. Psychotherapy is mental guidance."—Henry E. Sigerist, "Man and Medicine."

SIGNIFICANTLY, in his book on mental healers, Zweig chooses as the three outstanding names in this field Mesmer, Mrs. Eddy, and Sigmund Freud. In previous chapters I have shown the gradual evolution of faith healing from the time of Paracelsus through Mesmer and Mrs. Eddy to all of the charlatans as well as to the scientific psychotherapy of modern times. Whenever any discovery is made in science it is used, promoted, and exploited not only by scientists who pursue investigations for the advancement of knowledge and who adapt the discovery to the treatment of ailing man, but also by charlatans who take advantage of the public interest and, with little or no knowledge, emphasize those factors which appeal particularly to human weakness.

It would be folly to deny that the work of Sigmund Freud is one of the most fundamental contributions ever made to the happiness of mankind. It would be equally fallacious to assert that it has been an unmixed blessing. Out of the doctrines of Freud has come inspiration for an intensification of the public's interest in the mental aspects of sex gratification—an interest which innumerable quacks now promote for their personal gain.

THE RISE OF FREUDIANISM

The human mind is, unfortunately, so constituted that but few persons ever learn careful judgment; most align themselves promptly on one side or another of every thought or conception thrown into the field of conversation or controversy, and are then ready to offer up their life's blood, if need be, in defense of the views that they have adopted. The pendulum of thought is then never still but always toward one extreme or another, the pull upon it of the enthusiasts on either side being far greater than the pull at the central point, where the experience of the past would indicate it more properly belongs. The term "pendulum thinking" has been applied to this phenomenon. A good Freudian, reading this analogy, will immediately find in the pendulum one symbol and in the central point another; and I will immediately be convicted of resistances and other major phenomena in the Freudian category from which it is difficult even for so serious and careful a person as myself to escape.

The Freudian doctrines perhaps originated with Breuer in 1880 and definitely came upon the psychologic scene in 1894, apparently after Sigmund Freud had spent a brief period of study with Charcot, noted French psychiatrist. Whether for reasons of internationalism or perhaps because of simple jealousy, the French scientist, Janet, who seems to have been simultaneously a pupil, has never been quite able to forgive Freud the development of this new school of thought. One cannot call it psychology, for the standard psychologists have in general repudiated most of it. The practice of psychoanalysis as psychotherapeutics is properly the practice of medicine but the invasion of the field by hordes of quacks has made its very name anathema to most reputable psychiatrists. The educators have found the subject most thrilling in its application to the routine dullness of the educator's ordinary life. Hence it is that the finest blossom of this tropical plant is its relationship to the care of the growing child and its use for delving into the mind

of the sexually precocious adolescent. In any event, Janet claims this fragrant offshoot with one hand while he repulses it with the other in the following reminiscence of the Freudian visit:

At this time a foreign physician Dr. S. Freud came to Salpetrière and became much interested in these studies. He granted the truth of the facts and published some new observations of the same kind. In these publications he changed first of all the terms that I was using: what I had called psychological analysis he called psychoanalysis; what I had called psychological system . . . he called a complex. He considered a repression what I considered a restriction of consciousness; what I referred to as a psychological dissociation, or as a moral fumigation, he baptized with the name catharsis. But above all he transformed a clinical observation and a therapeutic treatment with a definite and limited field of use, into an enormous system of medical philosophy—the philosophy of Pansexuality.

Dr. Smith Ely Jelliffe asserts that Janet later repudiated these statements. Janet is not, however, the only critic of the Freudian school who insists that Freud derives largely from other schools of thought. The difficulty of tracing the derivation lies in the fact that the Freudian school has developed an entire nomenclature to facilitate converse among the elect, much as a group of recalcitrant youngsters adopts a sort of hog-Latin to keep its transactions away from the juvenile bourgeoisie. Some of the critics refer to the doctrine of purification of the emotions evolved by Aristotle. Others mention Mesmer and his healing by hypnosis. Many insist that the entire system is simply an elaborate ritual for conveying suggestion without the laying on of hands. Perhaps the associated technic is sufficient to make the laying on of hands an extremely elementary process by comparison.

THE BASIS OF PSYCHOANALYSIS

The basic conception of Freudianism is the comprehension of the "unconscious." This is the portion of the mind

which is perhaps not directly responsible for carrying on the functions of human existence that are simple processes in addition—and yet by the Freudian conception the unconscious enters into every human activity. Indeed, all of our ethics, morality, culture, and civilization are products of its work. It seems indeed to be the powerful minister behind the throne who insidiously guides the monarch—the conscious mind—into any plan that it desires. The unconscious has been described as a “magic cave where, by psychoanalysis, one can discover anything one puts into it.” The most carefully reasoned presentation of the Freudian unconscious in brief form must be credited to Morton Prince, although Freudians insist that Prince has not passed the subconscious of Janet. He considers that it embraces only mental processes that have been repressed from or kept out of consciousness because intolerable by reason of their unmoral, unsocialistic, and other characteristics; that for the most part never have entered awareness and therefore have been unconsciously and automatically kept apart; that are essentially of infantile origin and nature, the splitting of the mind into conscious and unconscious regions having taken place in the earliest part of childhood, probably in the first year; that involve the crude primitive instincts; that are predominantly sexual in character; and that, as they, necessarily like all processes, are dynamic, are sexual wishes. Morton Prince dismisses these views with the simple statement that they are not true, not confirmed by methods of research and, indeed, actually contradicted by scientific observations. Sachs, viewing the orgy of sexual associations that arises from any one's unconscious when an adept Freudian disciple becomes active, blurts out that “what Nature in her wisdom assigned to the unconscious had better remain there.” Yet the Freudians would have it that this “Unconscious” is the dominating factor in our lives and that not only mental disturbances but phenomena such as pain, convulsive seizures, nervous coughs, spells, states of anxiety, images of compulsion, hallucinations, and illusions are simply the symbols by which this Unconscious reveals itself to the outer world.

Anyone will grant that the human being avoids disagreeable experiences and prefers not to think about them. It may be admitted that the eye constantly sees, the ear hears, the hands feel, and the nose smells without positive recording of the impressions concerned. No doubt, the infant before arriving at the age of memory or reason is automatically receiving certain impressions. Then, too, all of us inherit forms of body structure, perhaps particularly brain structure, which may be concerned in our methods of thought and action. Certainly the will to survive, the desire to reproduce, the wish to satiate hunger, are fundamental in man as in the lower animals. But the Freudians would have it that these things are the impelling motives and that they see them about in this Unconscious ever ready to burst forth against their owner's will. To prevent their eruption, their owner represses them or holds them down consciously, and this conflict between conscious and unconscious is the basis of all sorts of nervous and physical disorders, which are relieved, as we shall hear later, by psychoanalysis.

The German internist, Bümke, hesitates to accept such a complicated explanation of the situation. He recognizes that there is a crossing of several motives in the case of most human convictions and actions, and that the real reason for a certain act is not always that which appears most logical but often one based largely on emotions. "Numerous contradictions arise in the life of a person," he says, "and it is these contradictions that we often discover in a disguised form in many neurotic individuals. Whoever is acquainted with the rationality of such an occurrence will, without the aid of psychoanalysis, have no difficulty in bringing out the truth and rid the patient from his troublesome complexes."

THE SEX FACTOR IN PSYCHOANALYSIS

As has already been emphasized, the sexual factor looms largest in the Freudian doctrines. All Freudians are agreed on the place of the unconscious but they are not so uniform in their acceptance of the place of sex as the prime factor in the unconscious. Indeed, many resort to strange evasions

when the critics attempt to fix them definitely on this point. What was formerly understood by love—namely sexual love—has been gradually expanded into a new and much broader usage of that term. The Freudian “libido” embraces far more than could as notable a lover as Brigham Young. In the most recent enunciation of Freud himself “we call by that name the energy (regarded as a quantitative magnitude, though not at present actually measurable) of those instincts which have to do with all that may be comprised under the word ‘love.’ The nucleus of what we mean by love naturally consists (and this is what is commonly called love—and what the poets sing of) in sexual love with sexual union as its aim. But we do not separate from this—what in any case has a share in the name love—on the one hand self-love, and on the other love for parents and children, friendship and love for humanity in general and also devotion to concrete objects and to abstract ideas. Our justification lies in the fact that psychoanalytic research has taught us that all these tendencies are an expression of the same instinctive activities; in relations between the sexes these instincts force their way toward sexual union, but in other circumstances they are diverted from this aim or are prevented from reaching it through always preserving enough of their original nature to keep their identity recognizable (as in such features as the longing for proximity, and self-sacrifice) . . . Psychoanalysis then gives these love instincts the name of sexual instincts, *a posteriori*, and by reason of their origin.”

The technic of psychoanalysis both as a method of diagnosis and of cure seems to be essentially simple, yet the great founder himself insists that one cannot become a good psychoanalyst without a visit to the fountainhead in Vienna, that one cannot be a psychoanalyst until one has been himself submitted completely to the complete process, and that the fountainhead technic is the only technic. There exist several tomes in which disciples have endeavored to describe the technic in detail. But just as chiropractic split from or derived from osteopathy, so also have a dozen or more

other schools of psychoanalysis derived from the original school, and new tricks of technic have originated with them. In a recent promulgation one direct apostle insists that the average time for an analysis is from six to eight months with five or six sessions each week. One ritual demands that the patient lie upon a couch in a dimly darkened office. There she—and the word falls naturally for it is usually a feminine patient—begins her long autobiography and there the psychoanalyst sits—we hope—listening and stimulating ever more and more juicy revelations.

THE DREAM AND ITS INTERPRETATION

If there is ever a period in which the unconscious is at its best, that time is when a person dreams. Certainly his conscious cannot be dominating, because it is impossible when actually asleep to dream what one wishes. Those who dream while awake have no difficulty, however, in accomplishing in their fantasies the things they desire. The Freudians have it that the dream accomplishes what the unconscious desires—it is a wish-fulfillment. Obviously the activities of the personnel involved in the dream are modified not only by all of the person's past experience, indeed even by his prenatal state, but also by all recent events and particularly by events of the day. The good psychoanalyst begins promptly to delve into the inner meanings of the dreams of his patients. At this point, frequently the dirty work begins.

During the dreams the censor, that mythical controller of the complexes, is still active but not so wide-awake, as when the person concerned is about his daily affairs. However, the censor continues to function sufficiently to cause the unconscious to adopt disguises for the persons and the ideas that are exploited in the dream. These symbols of things and persons have been organized to a certain extent, but their possibilities are limited undoubtedly only by the limits of imagination of the psychoanalyst who is interpreting the dream. For instance, sex activity may be symbolized either by flying or falling, by going upstairs or by going downstairs, by riding, by fighting, by anything. The organs

of sex are symbolized by hundreds, actually thousands of objects, usually of the most ordinary varieties of things occurring in daily life. In a dream analyzed by Jung, the patient dreamed of a certain number. "By adding in an ingenious way the figures for the year, month, and day of birth of the patient, of the patient's wife, his mistress, and his two children," says Dunlap, "the total gave the number, which is therefore the symbol of the patient's domestic triangle." Again and again these dream analyses fall into a *reductio ad absurdem*, but it remained for S. A. Tannenbaum, in the *Journal of Abnormal Psychology*, to investigate one of the dream analyses made by Freud himself, and to convict the great master of an apparent deliberate faking of a dream to prove a point.

It has been urged that psychoanalysis is a scientific method. Unfortunately, no two psychoanalysts seem to agree in the interpretation of a dream. In one instance reported in the scientific literature two analysts differed as to an interpretation. The matter was referred to Freud and to Jung, and two additional interpretations were secured. A scientific method yields the same result every time. Actually, this variation of result and this continuous correction of the experiment to get a result that will fit the picture throws the method completely out of the scientific field. "When in interpreting a given phenomenon, as for example, to take the stock phenomenon, a dream," says Morton Prince, "we have to apply one or more of the various theoretical mechanisms, such as conflict, repression, displacement, compromise, disguisement (to avoid the hypothetical censor), inversion, transposition, dramatization, condensation, sublimation, fixation, compensation, etc.—when we have to do more or less of all this in order to connect an antecedent experience logically with the dream or other phenomenon under investigation, it is obvious—at least so it appears to me—that the method falls far short of having that exactness which scientific procedure requires, and becomes a source of a large number of possible errors."

SOME SCHOOLS OF PSYCHOANALYSIS

In the dream the complexes find a stage for their dramatizations. Using the scientific method, the complexes have been classified. Such conceptions as the Oedipus or "mother" complex (the turning of the sexual desire of the boy toward his mother); the Electra complex (desire of the daughter for her father); the various perversions of sex desire; narcissism; the inferiority and superiority complexes are the talk of the day among the intelligentsia, the artists, the Greenwich villagers, and the other insecta that thrive in a half-intoxicated condition in Batik-hung studios where the lights are low and the tobacco smoke thick enough to cut with a knife. On the relative importance of these complexes the psychoanalysts have waged bitter civil warfare. From Freud have derived the schools of Jung, of Adler, and of a half-dozen other well known disciples such as Stekel, Ferenczi, Ernest Jones, and Otto Rank abroad, and Jelliffe, Brill, White, Kempf, and others in this country.

After Carl Jung of Zurich had studied psychoanalysis under Freud he evolved a different conception of the urge that drives mankind. Whereas the Freudian libido denoted sexual energy the Jung urge manifests other than sexual activities. Indeed, Jung conceives of progression which is a striving forward and regression which would make man go back to the irresponsibility of infantile and prenatal life. This regression, let it be understood, is essentially the Freudian Oedipus complex. Moreover, Jung is primarily responsible for the popularity of that delightful form of after-dinner amusement known as the word association test, which, Dr. Jelliffe informs me, originated with Wundt and Münsterberg. In this method of determining the complexes, the patient receives a list of words and is instructed to respond to each with the first word that comes into his mind. The time necessary for each response and the unusual responses indicate that the person is concealing something because of a conflict. Among some of the other indicators of the presence of a complex are repetition of the stimulus word, re-

PSYCHOANALYTICAL CHARLATANS

sponse to a word previously given, naming some object in sight, rhyming to the word given, no response, or failure to reproduce the same response on repeating the experiment. Jung is also the formulator of the classification of mankind into "introverts" and "extroverts," conceptions which he first introduced in his *Psychology of the Unconscious* and which he has recently expanded into the scope of a new volume. The introvert withdraws himself from reality and lives in the realm of thought—a poet, a painter, a professor. The extrovert is gregarious and a man of action—probably a traveling man. Finally Jung must be credited with having taken the new school of thought into high society. His disciples, particularly in Chicago, have given great concern to the public prints; he has lectured with great pecuniary emoluments; his nomenclature runs from the tongues of the four hundred more glibly than "two no trump."

THE ADLERIAN SCHOOL

Alfred Adler, major prophet of another offshoot of the great Viennese school, puts the main emphasis on the ego instincts instead of on the sex instincts. The dominating impulse in life is for power and the urge toward security. The desire for superiority is a compensation for a feeling of inferiority that may be based on an actual or a supposed defect of the body of the person concerned. Neurotic symptoms represent to him a protest against a constitutional inferiority or an inferior position in life. For example, hysterical outbreaks in women are frequently a protest against the supposed inferior position of women in general. As outlined by Hunter, the Adlerian conception relates degeneracy, genius, and neurosis in the following manner: The degenerate succumbs to his inferiority, for his compensation is unsuccessful. The genius completely compensates for his inferiority by remolding himself or reality to suit his purpose. The neurotic compensates for his inferiority by a fantastic creation. He denies reality and compensates in day-dreams or in behavior that does not adjust him properly to

his environment. Such power as he achieves is secured through sickness by which he compels others to his wants.

The great work of Adler that has reached general acceptance has been his coöperation with pedagogic methods in Vienna. He conceives of a large majority of children as discouraged, which is of course merely another way of saying that they suffer with the inferiority complex. The discouraged child has this discouragement for one of three reasons: an organic defect, such as deafness, a club foot, a disturbed digestion, or some similar weakness; because it is spoiled due to parents having yielded to all of its minor demands, so that it has learned to lean constantly on others for its security; or because it is a hated child and conceives of all of the world as its enemies. Assuming that every child seeks some goal in life, for all of us constantly strive upwards, the discouraged child meeting an obstacle makes its escape by lying, stealing, or some other abnormal conduct. This psychology makes it a simple matter to excuse criminal actions of all kinds, since obviously responsibility for such actions must constantly be fixed on circumstance. The pedagogic method involves a retracing of the history of the child to the point at which its progress was blocked. It is then shown the reasons for its attempt to escape and it is pointed out that the heroic action in striving for the goal is taking the right path through the obstacle or over it, and not by evasion. This conception of Adler's is generally accepted as a major contribution to pedagogy, since it has done much to correct evil trends in childhood.

When this conception is applied to neuroses in women or to the criminal actions of adults, it begins to assume the possibilities of a dangerous cult, since it teaches the doctrine that the individual is never responsible for his actions. In its pursuit of the cause of the neurosis, it must perforce lean heavily upon sex causes which titillate the imagination and attract the neurotic. It is significant that Heinrich F. Wolf, one of the chief Adlerian disciples, has just issued a volume on *The Strategy of Masculine Seduction*, in which the technic of the modern Casanova is thoroughly elucidated. To

PSYCHOANALYTICAL CHARLATANS

this volume Adler himself contributes an introduction with the sophistic argument that the value of such an analysis will be to make it possible for women to resist such anti-social conduct. The work will also have the advantage, he suggests, of removing obstructions to love interests, and thereby prevent neurosis and antisocial conduct. Adler also remarks naïvely that whenever he has lectured on human psychology and has permitted the audience to ask questions, 70 per cent of the questions were concerned with the technic and problems of love.

The whole conception of defense mechanisms, the building up of psychic compensations, the refuge in fantasy or heroic dreams of those who are inferior, the notion that one whose vision is defective compensates for the power by an acquired delicacy of touch or hearing, was fully expressed by the Irish bull, that it was a surprising thing that whenever a man had one leg that was shorter, the other was always longer.

Stekel, one of the most popular writers for the public on psychoanalysis, unquestionably derives all of his popularity from his facility as an author in this field. Possessed of a magnificent imagination, he is never at a loss for a suitable case to prove his points. Indeed, many Freudians have urged that he is not averse to using his creative art in developing suitable case material for such purposes.

Everyone has heard of these major prophets of psychoanalysis. Few know about the vast number of disciples with slight modifications or individual idiosyncrasies to whom suitable space might be allotted. In our own country, Kempf has tried to get a physiologic basis for most of the neuroses and the mental disturbances, with a view to securing greater medical acceptance. His psychoanalytic practice is confusedly intermingled with much stress on the glands of internal secretion and on the autonomic nervous system.

PSYCHOANALYSIS OF EVERYDAY LIFE

Among the most fascinating applications of psychoanalysis has been the attempt to apply this method to a study of the

minor mental incidents of daily life. The Freudians would have it that the traveling man who tells an obscene story in the smoking compartment of a Pullman car is merely resorting to a form of exhibitionism that takes the place of an actual display of his sexual proclivities. The person who makes a slip of the tongue or a slip of the pen does so because he is anxious to conceal his real mental attitude in the matter concerned. Forgetting, for instance, it is alleged, may sometimes be due to repression of something which one is anxious to forget, and probably, in the majority of instances, a sexual wish. On the other hand, it has been urged by psychologists who have given much attention to the matter that persons frequently fail to remember simply because of a natural condition of disinterest, and perhaps still more often because their minds are fixed on matters which interest them a great deal more. Indeed, Morton Prince asserts that the whole problem of remembering and forgetting is subordinate to the fundamental problem of why we remember at all. Such daily incidents of life as repeated washing of the hands, the Freudians assert, are due to some occurrence, perhaps in infantile life, in which the hands were concerned in a sexual catastrophe. Actually a good Freudian, if there is such an animal in the opposite sense of the word, seems to be able to find some obscene cause for practically any action on which a person may fix his attention, or about which he prefers not to speak. On the other hand, the majority of more careful thinkers are inclined to believe that sometimes we forget because we simply "do not give a damn."

I have heard Adler say, I have read in the writings of Freud, and of others in this particular field, that every action of human kind, individual or social, may be explained by the psychoanalytic technic. The absolute apotheosis of the cult of psychoanalysis is perhaps best expressed by Trigant Burow of Johns Hopkins University in his recent screed on this topic. He is certain that psychoanalysis will explain both religious hysteria and war, and he continues:

PSYCHOANALYTICAL CHARLATANS

Our frenzied greeds, our national competition and usurpations rest upon definitely compulsive reactions within the national consciousness. Our market inflations and our financial depressions are but the fluctuating mental states that represent the manic and depressive phases of an unstable social cyclothymia.

The superficial and naïve explanations popularly assigned as the real occasion for these manifestations—such, for example, as the alleged necessities of territorial expansion, international commercial competition, the urgency of tariff readjustment, race prejudice, nationalism, our economic franchise, the rights of the minority, etc.—all these manifest symptoms are but the unconscious rationalizations well calculated to repress from the social consciousness the real underlying occasions of our national neuroses. What is called capitalism, Nordic superiority, bolshevism, fascism, class consciousness, one hundred per cent patriotism, industrial democracy, our fluctuating ratios of monetary exchange—all these and a thousand more are but mental states which, instead of being greeted by us as substitutive manifestations calling for definite analysis and adjustment, are universally accepted as bona fide expressions, and their latent meaning remains completely unchallenged in its psychosocial implications.

PSYCHOANALYSIS AND LITERATURE

The criticisms that have been leveled against the development of psychoanalysis as a department of medicine or as a healing cult have varied from the simple assertion of Joseph Collins that the medical profession by and large, the world over, repudiates Freud, his theory of neuroses, and his system of therapy to the terrific indictment of Frederick Peterson that psychoanalysis is a species of voodoo religion characterized by obscene rites and human sacrifices. When the Freudian conception was first launched upon the intelligentsia it became the plaything of artists, litterateurs, and critics. It succeeded in dominating the writing of May Sinclair and in devastating such merit as existed in the work of D. H. Lawrence and J. D. Beresford. In this country a host of novelists, including perhaps Evelyn Scott, Ben Hecht,

and the early Sherwood Anderson, were enabled to make intricate introspective analyses of their own sexual misgivings. Even the literary intelligentsia, however, are beginning to line up with the psychologists and the physicians in their hesitancy to accept absolute Freudian domination. This repudiation seems to have resulted in the establishment of the practice of psychoanalysis by amateurish performers primarily perhaps for their personal excitement, but secondarily for commercial gain. The invasion of the field by such pseudoscientific writers as André Tridon, Harvey O'Higgins, and William Walsh is evidence of the opportunity afforded for exploiting such literary tripe. Unfortunately, some physicians have also lent themselves to similar exploitation.

PSYCHOANALYSIS AND MEDICINE

The practice of psychoanalysis for the healing of disease is the point at which it invades the medical field primarily. Its use in the treatment of disease has been a part of medical practice since the beginning of time. The confessional of the Catholic Church, relieving thousands of disturbed minds, as well as every method of faith healing that has ever existed, including Christian Science, Couéism, autosuggestion, amulets, charms, incantations, chiropractic, and the laying on of hands in general, can report hundreds of cures of persons who are not actually sick. It is, however, an entirely different process to apply such methods simply and directly for healing of neuroses with a full knowledge of the reason for the application and with a full knowledge of any organic defects that may exist in the person concerned, and to use all of the paraphernalia of the charlatan to attract ladies of leisure and unfortunate victims of sexual aberrations into a method of treatment requiring months of time and tremendous financial outlays.

Worst of all, the majority of good psychiatrists are convinced that the orthodox method of psychoanalysis as practiced by the out-and-outers in this field is distinctly wrong in principle and meretricious in practice; that it degrades

PSYCHOANALYTICAL CHARLATANS

the personality; produces harmful results and is, in general, indefensible. "One need not be a physician," says a competent authority, "to realize that an infant is suffering from constipation, nor does it require considerable experience in life to know that nervous women during a reception will occasionally put their fingers in their pocketbooks. The infant does not do this because it derives pleasurable satisfaction, nor does the nervous lady signify a sexual relationship by her act."

Men of long experience in the psychiatric field are able to produce numerous instances in which the psychoanalytic technic has been the prime occasion for a severe disturbance of mentality by turning a sexual interest into a sexual aberration. The careful physician is perhaps even more likely to be wary of a part of the Freudian technic, because apparently the only way the patient has of ridding himself of some of his most difficult complexes is to transfer them to the doctor.

The invasion of the field by psychoanalytic amateurs has finally resulted in setting up defensive reactions among the psychoanalytic medical practitioners. In Vienna the physicians' group demanded that one of the nonmedical psychoanalysts discontinue his practice, although he was certified by the great Freud himself, and insisted that psychoanalysts who are not physicians have not the right to treat patients for disease. A federal ministry of public administration, as the highest authority, has been called on to consider an opinion delivered by the leading psychiatrist of Vienna to the effect that only physicians should treat patients suffering from mental disturbances. In their defense, the lay psychoanalysts set up the fact that in America psychoanalysis is not regarded as a branch of medicine, but is considered to be primarily in the field of pedagogics and spiritual guidance.

Notwithstanding this defense, the New York Psychoanalytic Society was compelled recently to adopt resolutions urging that the practice of psychoanalysis in the treating of mental disease be restricted to physicians and that even the

psychoanalytic instruction of specialists engaged in anthropology, theology, law, pedagogy, and social service be limited to the use of this training for the interpretation of problems in the special fields concerned. Furthermore, these medical psychoanalysts demand that the instruction be limited to those having at least the Bachelor of Arts degree, and above all, unequivocal evidence of good moral character.

The Freudian school will not recognize the status of anyone in psychoanalysis unless he has himself been through the procedure with Freud or his immediate lieutenant. The great apostle is himself the founder of a school of which he is the despotic head. It is asserted, as it has been asserted by many charlatans in other fields, that this is to protect the method against quackery. On the other hand, a scientific method is able to stand any type of study or investigation. The psychoanalysts insist, as do all cultists, on an "all or nothing" policy. When criticized, they seek escape by evasion, yet they urge that in every normal person sexual perversion is latent, and they attempt to classify as erotogenic every portion of the body that may in some manner be involved in sexual pleasure. The use of symbolism has been exaggerated to a point beyond reason.

The great contribution of Sigmund Freud, as admitted by all of the critics, has been to attract greater attention to the processes of the human mind, to stimulate the acceptance of the mind as such in its relation to disturbances of personality; in other words, to recognize that the study of objective changes in the human body is not sufficient to account for mental aberrations. The psychology of everyday life, the views regarding the dualism of the human mind, and its fundamental modifications have been a tremendous stimulus to psychology and to psychiatry. They have modified pedagogics and have created the new profession of behaviorist.

The position of Freud in the history of psychology is secure, but it is not the position that has been assigned to him either by his friends or his enemies. Psychoanalysis

PSYCHOANALYTICAL CHARLATANS

cannot be said today to be in any sense of the word an established science—the time may come when it will be recognized as a significant portion of the science of the human mind.

THE PRESENT PSYCHOANALYTIC SCENE

Out of the interest in psychology and psychoanalysis of the last twenty-five years has come a new species of peddlers of psychologic treatment, known as practical psychologists or character analysts. Their doctrines are platitudes which strike the intellect of *Homo Americanus* with the force of direct communications from high Olympus. Their appeal is to the fundamental desires and weaknesses of this same *Boobus Americanus*, his love for financial success, social prominence, and his desire for relief from his vague and fancied ills. In one conference and for a few pitiful dollars, these psychologic charlatans, completely uninformed regarding true scientific psychology or psychotherapy, attempt to advise men and women concerning their mental disturbances. Sometimes individual conferences follow public seances held in large halls. A typical example is reminiscent of the days of Mesmer.

The large auditorium is filled with beautifully gowned women and a few sopranolike men. There is a subdued hum of chatter and light laughter. Silently the magnificent maroon velour curtains are parted as though by some invisible genii; the lights become dim. Then there walks—almost glides—on the stage a man faultlessly attired, his lustrously brilliantined hair brushed back smoothly from a pallid countenance. The audience is hushed. The professor begins to speak in sympathetic tones, pouring forth well-rounded but meaningless phrases about the perfection of ideality, happiness through the sacrifice of the eccentric Ego, the attainment to Nirvana through immolation on the pyre of ideal scientific introspection. He promises youth and health to those who will believe and study.

And the audience—women, occupiers of one-room kitchenettes, suffering with the ennui of idleness, their faces

elaborated with artifices in attempt to simulate the long lost buoyancy of youth—sighs happily as it dreams of the mirage he brings up before it. Quiet ushers pass along the aisles and with sibilant whispers distribute cards on which arrangements may be made for personal consultations with the professor at \$10 per visit. Thus works the newer quackery—health and happiness and a little erotic stimulation through commercialized psychology.

A FEW CHARLATANS

In some of the cheaper tracts sold to the public by our commercialized press one reads the advertisements of some of the psychics who are capitalizing this new state of public interest. There is, for example, C. Franklin Leavitt, born in 1873, graduate of a homeopathic institution in 1896, and organizer of a medical psychologic society. At one time he developed what he called the *Magnum Bonum Company* which should have been interpreted as the best thing he had yet thought of for his own profit. This concern published a magazine called *Thought*, took full page space in Mr. Bernarr Macfadden's medium of education, and promised self-mastery through understanding. Of course, he also promised rejuvenation and preached optimism. At first he offered just a \$100 course; this, however, may be had, if the prospect waits long enough for the full series of follow-up letters, for \$3.50.

Not long since, there appeared in announcements on the billboards of Chicago and in such newspapers as would accept the advertisements, statements concerning Lahissa, the New Teacher. It seemed that the professor, who affected the appearance of a Hindu yogi, was to lecture in the hall of the Morrison Hotel and that he would reveal the unknown, unscrew the inscrutable, and offer lessons leading to success. For a consideration, the professor also promised private lessons on how to concentrate. The lectures and the demonstrations were all subtly sexual. It occurred to Mr. Richard Finnegan, editor of the Chicago *Daily Times*, to send one of his best sob sisters for personal consultations

not only with Lahissa but also with a half-dozen other associated psychoanalytic charlatans. The young lady made her reports daily in the *Times*; in a week five of the experts left town, one of them so hurriedly that he left his newly purchased Packard as a bonus for the police.

The most remarkable of all of the professors is one Alfred Ernest George Hall, M. D., Ps. D., M. Sc. D., F. Ps. A. When the American Medical Association began to look into Hall's career, it was found that actually he had never graduated from any college. He was nevertheless, if one believed his statements, Dean of the American Academy of Psychological Research, Vice President of the International Society of Psychological Research, and President of the International Society of Mental Light. In a typical performance Hall also duplicated and indeed improved on everything that James Graham, Mesmer and even Mrs. Eddy had to offer.

In the center of the stage from which he spoke stood a glorified device for indirect lighting covered with flowers. On each side of the stage were candelabra with three flickering candles simulating the staff of Neptune. The red and blue glow of the footlights gave to the lecturer and his staff a mystical appearance.

In various parts of this country and Canada, Hall proounds utterly filthy and unscientific lectures on sexual subjects, describing in the utmost detail, even to the point of obscenity, every variation of the sexual act and illustrating his salacious utterances with drawings of male and female organs in extraordinary juxtaposition. In the small towns his lectures were given to mixed audiences, some of them adolescent boys and girls. It was not surprising that Hall should have been seized by the police in several communities and that he is today constantly dodging legal actions still held against him. It is surprising that he is able to go on and on, as he has done now for half a decade, using all of the devices of the quack to exploit the unwary.

Between the scientific practitioners of psychoanalysis—and there are many such—and the outright charlatans, whose numbers are also considerable, there is a borderland

of first, semi-educated men who offer a scientific psychoanalytic service that they are not fitted to provide; and second, a number of psychoanalytic experts well qualified by study to carry on the work but noted among the profession for the extraordinarily excessive fees that they demand and secure from the patients who early develop fixations on their psychoanalytic physicians. As can be seen, the field is one in which the old rule of *caveat emptor* (let the buyer beware) must be constantly applied with all of the skepticism that the human animal can summon to the occasion. It is sad indeed that those who must make the choice are in many instances poor, harassed, driven specimens of the *genus homo* whose intellects, through sorrow and suffering or through physical disease, make them quite incapable of summoning to their defense anything resembling a judicial temperament or anything beyond a hopeful credulity.

THE CHOICE OF A PHYSICIAN

"Physicians mend or end us; but though in health we sneer, when sick we call them to attend us, without the least propensity to jeer."—Byron.

THE physician, if he is the graduate of a reputable medical school, has perhaps been told again and again, by preceptors and teachers, that his is a profession of service. No doubt, the example of sacrifices observed in clinic, dispensary, and out-patient departments have impressed this conception upon him even more. With his diploma, he receives an address on high aims and service and a copy of the *Principles of Medical Ethics* of the American Medical Association. Possibly he lays aside the little book to read after the celebrations and examinations associated with this period in his career have ended. Then he embarks on his internship and, following that, enters medical practice. But he is hardly likely to consult the booklet of ethics again unless invited to speak on the subject before some organization, or until some occasion arises in which he believes his rights may have been transgressed. Then he sends for a new copy, only to find in all probability that the things he thought were there are not really there at all.

The average man believes that medical ethics were developed primarily for the physician, and with but little regard for the interest of the patient. He believes that the physician is compelled either by this system or by some legal requirement to come to every patient every time he is called.

The physician believes frequently that medical ethics demand that other physicians treat him at any time and to any

amount without exacting a fee, and not infrequently that physicians give gratuitous service also to all members of his immediate family and the families of his more distant relatives.

He is certain that the principles prevent another physician from "stealing" his patients, and he is not infrequently of the opinion that the principles of ethics were formulated primarily for the protection of the rights of the individual physician rather than for the rights of the group.

In other words, the physician is first and foremost a human being with all of the failings of human beings in other businesses and in other professions. He is likely, if he is that kind of man, to think first of "number one." He may, if he has the instincts of a miser, put receipts above service. He may, if he is naturally quarrelsome and antagonistic, be constantly at odds with his colleagues and his patients. Yet, if he has obtained a reputation for master ability in diagnosis, in surgical technic, or in medical treatment, he may continue to have a tremendous practice and to maintain this practice against constant opposition.

In medicine, as in all other professions and trades, results count. Fortunately, the men who are great in medicine are also likely to be great in heart, great in mind and great in spirit; but there are exceptions, and physicians know of them probably oftener and better than do the public. After all, the greatest prize that a physician can secure is the esteem of his fellow craftsmen, not the easily procurable flattery of the credulous public.

The public seems to believe there is no way of telling a good physician, an ethical one, or a scientific one from an unethical or an ignorant one. In many instances, public judgment is based on the kind of car he drives, the church he attends, the social position of his wife, his whiskers, or the protuberance of his abdomen. Frequently, a 48-inch waist measure is taken as the equivalent of a 48-caliber brain. A man may be a good Elk, a first-rate Shriner, an excellent sachem of the Red Men, own his own home, and be considered a remarkable doctor, and still not be able to tell

THE CHOICE OF A PHYSICIAN

whether a sinking pain in the pit of the abdomen is due to an inflamed gall bladder or a gastric ulcer.

It is no longer possible to begin the study of medicine with a high-school education or less, and, indeed, to study even some of the technical procedures associated with medicine with such a minimum amount of education. Every reputable medical college now requires at least two or more years of work in an approved college of arts and sciences in addition to four years of high school education before a man can take up the basic medical subjects, such as anatomy, physiology, pharmacology, or bacteriology.

With the increase in the medical curriculum, it now costs at least \$800 to \$1,000 a year to educate a physician for a period of eight years. Since the student loses such money as he might have made during this period, the cost of his education approximates \$20,000. If, at the age of 18, he were to put \$20,000 in the bank, he would have at the age of 50 almost enough income to live comfortably thereafter without hard work.

Today there are so many different types of healers offering their services to the public that it is well to have a list of necessary qualifications in choosing a physician. Competence is not the only necessary criterion. A patient might be served with a doctor relatively less competent whom he could trust implicitly than with one highly competent known as an exploiter or even as a crook. In choosing a physician it is well to find out first whether or not he is a graduate of a reputable medical school, which requires at least four years of thorough training; next, whether or not he served his internship in a reliable hospital; third, does he belong to his county medical society or to the American Medical Association; fourth, if he holds himself as a specialist does he possess the certificate of one of the national examining boards in the medical specialties. If he does not possess this certificate, is he recommended by the general practitioners of the community as a competent specialist? As a rule it is best not to select a specialist until one has seen a

general practitioner, who, following a good examination, can tell whether a specialist is needed.

The doctor who advertises his methods in the newspapers or who passes out handbills, the doctor who has a big advertising signboard, or a big electric sign in front of his office, the man who guarantees a cure or who promises that he can cure any serious disease in one or two treatments, the man without a fixed residence who moves from city to city, and the one who claims special knowledge that no other physician has, is likely to be a charlatan and is not to be trusted.

The principles of ethics now official in the American Medical Association are a gradual evolution of a series worked over and developed through many years. It is significant that the work emphasizes, first of all, the duties of the physician to his patient. These duties include service as an ideal, patience, and delicacy as highly desirable qualifications, and full assumption of responsibility once a case has been undertaken. The principles of ethics emphasize that a physician is free to choose whom he will serve, but point out that he should respond to any request for assistance in emergencies or whenever temperate public opinion expects the service. Many a great merchant made his success on the same factors.

The second chapter is concerned with the duties of physicians to each other. The physician is told that he must be an honorable man and a gentleman, conform to a high standard of morals, and uphold the dignity of his profession.

Then comes the question of advertising. The solicitation of patients is unprofessional. The section dealing with this question is explicit, covering every possibility and leaving little doubt as to interpretation. But when all is said, the conclusion is actually that a man ought to conform to the customs of the community in which he lives. If it has been the custom to publish a business card in the country newspaper, the physician may do so; on the other hand, if this is not the custom, he may not do so.

The principles of ethics protect the individual physician against the commercial group by stating that no group of

physicians, organized as a corporation, may do any type of advertising that is not permitted to the individual. The difference in point of view here emphasized between medical ethics and those of business is clearly apparent.

Medicine has for years depended for its success on the personal relationship between physician and patient. The great leaders know that the maintenance of this personal relationship is essential. Hence, every phase of the principles of ethics is planned to protect the rights of individual physicians with the commercial ideal primarily in mind.

It has been said that John Wanamaker and Marshall Field owed their success to the idea that the customer is always right. In other words, the purchaser must be pleased, and he must be protected not only from the deceits of salesmanship but against his own folly. This, after all, is the type of personal relationship which must exist between the physician and his patient. A pleased patient, as the principles of ethics repeatedly state, is the best type of medical advertisement. Just as the old law of *caveat emptor* no longer prevails in modern business, so also do the principles of medical ethics proclaim, "It is unprofessional to promise radical cures; to boast of cures and secret methods of treatment or remedies; to exhibit certificates of skill or of success in the treatment of disease; or to employ any methods to gain the attention of the public for the purpose of obtaining patients."

The ethical physician will not prescribe or dispense secret medicines or other secret remedial agents. The analogy of this part of the medical code to the best type of modern business is perhaps the statement in the advertising of clothing of the percentage of wool or cotton which make its content. It is similar to the clear statement on fabricated silks that they are not actually silks.

The principles of ethics were set forth not as a threat but as an inspiration. Just as there are merchants who by their nature rejoice in the shrewd deception of the ignorant customer, just as there are egoists in the control of manufacturing industries who do not hesitate to place their personal

wishes above the good of all, so also there are in medicine physicians who feel that their judgment in the matter of prescribing remedies is better than that of the Council on Pharmacy and Chemistry, appointed by the American Medical Association to establish what is sound and reliable in new remedies.

The fault is not in the principles of ethics; it is in the character of the men who have failed to be inspired by the ideals and the high principles of their leaders. One might indeed quote Shakspere when Cassius is made to say, "The fault, dear Brutus, is not in our stars but in ourselves."

A patient lay seriously ill, his physician gave a sad prognosis and, after giving somewhat explicit directions as to his conduct, asked, "Now is there anything else that I can get for you?" "Yes," said the patient weakly, "another doctor."

From time to time, the official representatives of American medicine have debated the question of consultation, bearing in mind that the interest of the patient is paramount.

Section one of this portion of the principles does not equivocate. "In serious illness, especially in doubtful or difficult conditions, the physician should request consultations." And it continues, "In every consultation, the benefit to be derived by the patient is of first importance. Time and again physicians argue the question as to consultation with irregular practitioners, or those devoted to the tenets of some sectarian practice or cultist system." The principles of ethics are not specific on this point, but there is a section devoted to the honor of the profession, which says: "A physician should not base his practice on an exclusive dogma or sectarian system, for 'sects' are implacable despots; to accept their thralldom is to take away all liberty from one's action and thought."

There are many physicians who refuse to recognize cultist practice, even to the extent of giving aid to a patient while the patient is still under the care or control of such a practitioner.

THE CHOICE OF A PHYSICIAN

There are others who do not hesitate to come in and give advice to patients who may be under such care.

Above all, the physician must consider the good of the patient.

There are physicians who are careful to inquire of the patient as to whether or not he has seen a previous consultant and as to the opinions of the ones first consulted; there are others who are not too meticulous in determining this point. Indeed, a sagacious physician will know promptly from the information possessed by the patient whether or not he has been informed elsewhere concerning his condition. One is almost prompted to suggest that in these instances the wise physician will bear in mind the motto "*caveat vendor,*" just as the merchant must apply the same motto to the type of customer who shops too insistently and whose bills are likely to remain unpaid.

The principles of ethics recognize the fact that the medical diagnosis is usually paid for insufficiently in comparison with the reward of surgical technic. "The patient should be made to realize," say the principles of ethics, "that a proper fee should be paid the family physician for the service he renders in determining the surgical or medical treatment suited to the condition, and in advising concerning those best qualified to render any special service that may be required by the patient."

The third phase of the principles of ethics is again a recognition of the duty of the physician to the public. He is asked to remember that he is a citizen and to aid in enforcing laws and in giving advice concerning public health. During an epidemic, he must continue his labors for the alleviation of the suffering, without regard to the risk of his own health or life or to financial return. He is asked to warn the public against the devices practiced and the false pretensions made by charlatans, and he is told finally that these principles do not cover all of the obligations which he may have, but are wholly a guide which will supplement the ordinary conduct of a gentleman and the practice of the Golden Rule. The last sentence reads, "Finally, these

FADS AND QUACKERY IN HEALING

principles are primarily for the good of the public, and their enforcement should be conducted in such a manner as shall deserve and receive the endorsement of the community."

Fellowship in the American Medical Association is contingent on the possession of this membership.

The Association maintains a Judicial Council which carefully considers complaints brought against any of the fellows or members for infractions of any of the principles of ethics.

And the number of complaints brought and the number of physicians expelled from fellowship or membership each year is surprisingly small!

INDEX

- Abolitionist, The*, 186
Abraham, Adolphe, 269
Abrams, Albert, 10, 16, 17,
29, 87, 110, 132, 140-153,
159, 200, 201, 295
Adler, Alfred, 352-356
aerotherapy, 128, 129
Aesculapius, 4
Alabama health law, quoted,
195
Albizu, L. W., 167
alcoholic beverages, 283-287
alcoholism, 287, 288
Alereos system, 129
Allbutt, Sir Clifford, 263
Allied Medical Associations,
132
Alvarez, W. C., 264
American Academy of Medi-
cine and Surgery, 123, 124
American Association for the
Study of Spondylotherapy,
141, 146
American Cancer Research
Society, 130
American Child Health As-
sociation, 337
American College of Saglift-
ology, 125
American Commonwealth,
The, quoted, 9
American Cosmeticians' So-
ciety, 216
American Electronic Re-
search Association, 146
American Electrotherapeutic
Association, 295
American Heart Association,
336
American Institute of Bak-
ing, 359
American Institute of Ra-
tional Therapeutics, 146,
147
American Legion Monthly,
315
American Medical Associa-
tion, 25, 36, 37, 83, 88, 121,
123, 148, 153, 164, 204,
261, 272-278, 284, 285, 333,
334, 363, 365, 367, 370, 372
American Medical Liberty
League, 132
American School of Osteop-
athy, 81
American Society for the
Control of Cancer, 336
Anderson, Sherwood, 358
animal magnetism, 7, 8,
30
antivivisectionism, 180, 182,
183, 185-190

INDEX

- Archives of the Homeopathic Method of Curing Disease*, 25
- Aristotle, 21, 346
- Arkansas State Board of Eclectic Examiners, 40, 41
- Arnold, Benedict, 51, 263
- As You Like It*, quoted, 210
- Associated Press, 312
- Association for Medico-Physical Research, 297, 298
- astral healing, 129, 130
- Atlas, Charles, 168, 169, 171
- Auenbrugger, 142
- Augustus, Roman emperor, 254
- authors, medical errors of noted, 315, 316
- Autohemic Practitioners, 130
- Autohemic Therapy*, 130
- autology, 130, 131
- autosuggestion, 12, 66-70
- autotherapy, 131, 132
- Banting, 358
- barbers, 210
- Barker, J. E., 263
- Barnum, Phineas T., 2
- Barrington, E., quoted, 316
- Barton, Bruce, 327, 328; quoted, 327
- Bates, W. H., 159
- Baunscheidtism, 30
- Beach, Wooster, 33, 34, 39
- beauty preparations, 226, 227
- beauty shop legislation, 213-217
- beauty shops, 212-217
- beauty specialists, 210-227
- Beecher, Henry Ward, 3
- Belfield, William T., 231
- Bennett, Arnold, 51, 263, 264
- Beresford, J. D., 357
- Berlin, Irving, 334
- Bernheim, 70
- beverages, 279-288
- Biggers, Earl Derr, quoted, 314
- Billings, Frank, quoted, 205
- biodynamochromatic diagnosis, 124, 125, 132, 133
- biologic assay, 181-183
- biological blood-washing, 133
- birth control, 242-251
- Birth Control Review*, 244
- Blair, Vilray P., 217
- Book of Martyrs*, Fox's, 44
- Booth, E. R., quoted, 90, 91
- Bowen, N. H., 158
- Bowers, Edwin F., 133
- Boyd, E. W., 149-151
- bread, 255, 256, 259-266
- Breitbart, 169-172, 178
- Breuer, 345
- Brill, A. A., 352
- Brisbane, Arthur, 317-326, 339; quoted, 317-325
- British Medical Journal*, 149
- Brown-Sequard, Charles-Edouard, 229, 230, 239
- Browning, Robert, 6
- Brunonianism, 19, 30
- Bryan, William Jennings, 280
- Bryce, Viscount, quoted, 9
- Bull, Titus, 75

INDEX

- Bümke, 348
Burbank, Luther, 131
Burkman, Lucius, 47, 48
Burrow, Trigant, 326;
 quoted, 327
Burt Vacuum Tube, 235
Busby Chiropractic Special-
ists, 108, 109
Byron, quoted, 252
- California State Medical So-
ciety, 140
Calvert, Thomas, 75
Canstatt, 31
carbonated waters, 282
Carver Chiropractic College,
 104-106
Casanova, 129
Case of Mr. Crump, quoted,
 316
Casper, William LeRoy, 65,
 66
Celsus, A. Cornelius, 3, 6,
 290; quoted, 19, 28
Central Medical College of
 New York, 36
Chamberlain, H. St., quoted,
 242
Charcot, Jean-Martin, 8,
 345
chiropractic, 29, 73, 86, 98-
 116, 129, 146
chirothesianism, 133, 134
chocolate drinks, 281
Christ psychology, 64
Christian Philosophical In-
 stitute, 65, 66
- Christian Science, 5, 16, 17,
 29, 44, 49, 51, 52, 54-64, 67,
 72-74, 129
Christian Science Parent
 Church, 66
Christos cult, 134
chromopathy, 134
Church of the Truth, 64
Church of the Universal De-
 sign, 63, 66
Clark, P. L., 137
Clemenceau, Georges,
 quoted, 65
Clemens, S. L., see Twain,
 Mark
clothing propaganda, 330,
 331
Coca Cola, 280
coffee, 280, 281
Collard, Arthur de, 136, 137
College of Medicine, Bo-
 tanic, 36
Collins, F. W., 123, 124
Collins, Joseph, 357
Collip, 358
Colorado health law, quoted,
 194, 195
Committee on the Costs of
 Medical Care, 93
Common Law, The, quoted,
 191
Companionate Marriage,
 The, quoted, 316
Comstock, Anthony, 157
Connecticut licensing law,
 quoted, 200
Connecticut Medical Society,
 10, 14-16; quoted, 15

INDEX

- Connecticut State Board of Eclectic Examiners, 40, 41
Coolidge, Calvin, 164, 205
Cooper Medical College, 140
Coué, Emile, 12, 44, 66-70
Cowan, Dr., 146, 147
Crafts, Hiram, 52
Cramp, Arthur J., 153
Creel, George, 310
Cullen, William, 20
- Daily Times*, Chicago, 362
Dakin, Edwin Franden, 63
Dame, Susie Magoun, 53, 55
Dearborn Independent, 149
Debs, Eugene V., 119-121, 126
Defensive Diet League, 298
De Kruif, Paul, 119
Dempsey, Jack, 12
diathermy, 305
Dickens, Charles, 51
Dittemore, John V., 66
Divine Science, 63, 64, 70
Dixon, W. E., 286, 287; quoted, 287
Don Juan, quoted, 252
Don Quixote, quoted, 266
Dowie, Alexander, 44, 70, 71
Dresser, Julius A., 57
Duhigg, Thomas F., 103
Duncan, Charles H., 132
Dunlap, quoted, 351
dyskinesia, 333
- Eagle*, Brooklyn, 178
Eclectic Medical College, Cincinnati, 42
- Eclectic Medical College of New York City, 36
Eclectic Medical Institute, 35
Eclectic Medical Institute of New York, 36
eclecticism, 30-32, 34-43
Eddy, Asa Gilbert, 58, 59
Eddy, Foster, 60
Eddy, Mary Baker, 44-47, 49-63, 71, 344; quoted, 52, 55, 56, 57, 58, 117
Einstein, Albert, 84
electric light diagnosis and therapy, 134
electro-homeopathy, 134
electro-naprapathy, 134
electrotherapeutics, 134, 298-301, 304-308
Ellsworth, Oliver, 12
Elmer Gantry, 6
Emerson, Ralph Waldo, 3; quoted, 156
Emmanuel Movement, 64, 71
Epidaurus, 4
- fallacies, vulgar, 311, 312
fasting, 253
Federal Trade Commission, 14
Ferber, Edna, quoted, 314
Ferenczi, Sandor, 352
Field, Marshall, 369
Fields, John Parsons, 123
Fillmore, Charles, 74
Fillmore, Myrtle, 74
Finnegan, Richard, 362
First Church of Christ Scientist, Boston, 61

INDEX

- First National University of Naturopathy, 123
Fleischmann's yeast, 13, 14
Fletcher, Horace, 254
Fletcherization, 3, 254
Florida Board of Health, quoted, 191
Flower Hospital, New York, 27
food fads, 252-278
foods, value of specific, 273-278
Ford, Henry, 51, 149, 263, 264, 334, 339
France, Anatole, quoted, 1
Frank, Glenn, quoted, 30
Franklin, Benjamin, 9, 10, 48
Freud, Sigmund, 44, 344-352, 355-360
Frye, Calvin A., 60
Fuller, H. C., quoted, 38, 39

Gable, Clark, 168
Galen, 3, 30, 272, 290
Garrison, Fielding H., 31
George V., 319
geotherapy, 135
Ghadali, Dinshah, 201
Gibbons, Floyd, 310
Gil Blas, 20
Gillies, 217, 218
ginger ale, 282
Glandex Company, 238
Glandine Laboratories, 238
Glover, George Washington, 46
Glover, Washington, 45, 46
Goethe, quoted, 140

Goldberg, Rube, 118, 142
Gorgas, William Crawford, 16
Graham, John, 5, 6, 48
Growth of the Soil, 255

Haberlandt, L., 250
Hadwen, Doctor, 187
Hahnemann, Samuel Fried- rich Christian, 20-24, 26-28
Hahnemann Medical College and Hospital, Philadelphia, 27
hair treatment, 223-225
halitosis, 333
Hall, Alfred Ernest George, 363
Haller, Albrecht von, 23
Hamsun, Knut, 255
Hansen, Harry, 107
Harding, Warren G., 318, 319
Harvey, William, 30
Haygarth, John, 18
health legislation, 191-209
Hearst, William Randolph, 302
Hecht, Ben, 357
Henniker, Lord, 17
Henry, Patrick, quoted, 180
Herodotus, 255
Hetherington, 162, 163
Hickson, 70
Hippocrates, 3, 4, 30, 128, 272, 290
History of Medicine (F. H. Garrison), 31
Hoffmann, 19

INDEX

- Holmes, Justice O. W.,
 quoted, 191, 203, 209
homeopathy, 21-29, 30, 42
Home of Truth, 64
Hooper Foundation for Medi-
cal Research, 264
Hoosier Chiropractors' Asso-
ciation, 112
Horder, Sir Thomas, 150,
 151
Houdini, Harry, 74
Howe, Julia Ward, 3
Hubbard, Elbert, 131
Hufeland, Wilhelm Fried-
rich, 31
Hughes, Rupert, quoted,
 315, 316
Hunter, 353
hydropathy, 30
Hygeia, 5
- Illinois College of Somap-
athy, 137
*In the Evening of My
Thought*, quoted, 65
In Tune with the Infinite, 73
Ingersoll, Robert G., 6
International New Thought
 Alliance, 64
International Research Lab-
 oratories, 238
iridiagnosis, 125, 135
Irving, Washington, 51
- James, William, 3; quoted,
 254
Janet, P., 345-347
Jastrow, Joseph, 2, 55
- Jelliffe, Smith Ely, 346, 352
Jenner, Edward, 30
Jewish Science, 63, 71, 72
Jewish Science and Health,
 etc., 63, 71
Johnson, Alva, 13
Jones, Ernest, 352
Jones-Cooper bill, 206
*Journal of Abnormal Psy-
chology*, 351
*Journal of the American
Medical Association*, 14,
 26, 40, 83, 141, 204, 261-
 263, 309, 335
Jung, Carl, 351-353
- Kansas City College of Medi-
cine and Surgery, 36, 40,
 41
Kansas City School of Physi-
cians and Surgeons, 79
Kellogg, John H., 254
Kelly, G. Lombard, 249
Kempf, 352
Kennedy, Richard, 52-58
Kingdom of Human Hearts,
 66
kinistherapy, 157
Kneipp cure, 125, 127, 135
- Ladies' Home Journal*, 81,
 115, 161
Lahissa, the New Teacher,
 362, 363
Lane, Arbuthnot, 263
Laveran, 20
Lawrence, D. H., 357
Le Sage, René, 20

INDEX

- Leach, Paul, quoted, 69, 70
Leavitt, C. Franklin, 362
Lee, Roger I., 284; quoted, 284, 285
Leeuwenhoek, 30
Leonic healers, 72
Lewis, Sinclair, 6, 119
Lewis Laboratories, 236, 237
Lewisohn, Ludwig, quoted, 316
Lichtenstein, Rabbi Morris, 63, 71, 72
Liebault, 70
Liederman, Earl, 172
Limpio comerology, 135, 136
Lindlahr, Henry, 118, 119
Lindlahr Sanatorium, 118-121
Lindsey, Ben B., quoted, 316
Listerine, 333
Locke, John, 255
Longworth, Alice Roosevelt, 12
Lorenz, Adolph, 232
Lucky Strikes, 14
Lust, Benedict, 119, 121, 122, 125, 127, 133, 136
Lynch, Richard, 74
- MacFadden, Bernarr, 119, 120, 131, 133, 156-163, 166, 302
MacMahon, Charles, 173, 174, 177, 178
Maddox, 1, 2
malapropisms, medical, 309-311
malaria, 20, 21
- malted beverages, 281
Man and Medicine, quoted, 344
Mandel, Leon, 131
Mann, Horace, quoted, 309
Manning, William T., 338
Mapp, Mrs., 6
Marshall, John, 12
Martial, quoted, 327
Mason, William "Billy," 12
McCollum, 257; quoted, 264
McComb, Samuel, 71
McFadden, Michael, 174, 175
McFee, William, 302
McIntyre, O. O., quoted, 315
McKim, W. Duncan, quoted, 76
McLean, James A. M., quoted, 136
McPherson, Aimee Semple, 6
medical advertising, 327-343
medical propaganda, 327-343
Medical School of Fredonia, 36
Medicine Man, The, 1, 2
Mencken, H. L., 180, 188
Menjou, Adolph, 46
Mental Healers, 53, 54, 344; quoted, 54, 57
Mesmer, Franz Anton, 7, 8, 19, 44, 48, 344, 346, 361
mesmerism, 7, 8, 30
metallic tractors, 9-12, 14-18
Metropolitan Life Insurance Company, 333
Meyer's Blood Purifier, 37
Meyer-Steinheg, Professor, 24

INDEX

- Millikan, Robert Andrews, 145
Milton, John, quoted, 21
Molière, 20
Moll, 8
Moras, E. R., 130, 131
Morgan, Agnes Fay, 267
Mother Earth, 255
Mrs. Eddy, the Biography of a Virginal Mind, 63
Münsterberg, Hugo, 352
Murray, C. H., 137, 138
Murray, John, 70
Mussolini, Benito, 323
- Napoleon I, 323
Nash, Harriet I., 227
Nash, Ogden, quoted, 228
Nathan, George Jean, 180
National Antivivisection Society, 188
National Association of Panpathic Physicians, 118, 130
National Brain Power, 166
National Eclectic Medical Association, 36
National Education Association, 270
National Hairdressers' Association, 216
National Health Council, 336
National Medical University, 118, 130
National New Thought Society, 72
- National Tuberculosis Association, 336
naturology, 136
naturopathy, 73, 118-128, 136
Naturopathy School and Health Home, 122, 123
neurocalometer, 111-113, 153
New and Nonofficial Remedies, 261
New Guide to Health, 35
New Mexico, beauty legislation in, 216, 217
New Thought, 16, 63, 64, 65, 72-74
New York County Medical Society, 34
New York Homeopathic Medical College, 27, 132
New York Medical Academy, 34
New York Psychoanalytic Society, 359
New York Reformed Medical College, 36
Newell, 70
News, Modesto, Calif., quoted, 313
Newspaper and the Historian, The, quoted, 336, 337
Norris, Frank, 255
Nuxated Iron, 12
- odic force, 30
O'Higgins, Harvey, 358
Olsen, Caroline M., 135, 136
Olsen, Emil, 135

INDEX

- Organon der Rationellen Heilkunde*, 21; quoted, 22, 23
oscilloclast, 111, 142-151
Osler, Sir William, 37
Oslund, R. M., 231, 248
osteopathy, 76-83, 85-97, 98, 99
Our Dumb Animals, 186
Oursler, Fulton, 156
Outlook, 13, 156

Palmer, B. J., 98, 99, 102, 103, 107, 108, 110-113, 115, 116, 153; quoted, 98, 99, 102, 103, 108, 110, 111
Palmer, D. D., 98, 99, 102, 103
Palmer, Mabel, 107, 113
Palmer School of Chiropractic, 103, 107, 111, 115, 116
Paracelsus, 6, 7, 21, 30
Parke-Davis and Company, 131
Parsons, Luella, 332
Pasteur, Louis, 16, 19, 181, 312
pathiatry, 136
Paton, Stewart, 76
Patterson, Daniel, 46, 49, 51
Paul, St., 33
Pearl, Raymond, 287, 288
Pearson's Magazine, 149
Penguin Island, quoted, 1
Pennsylvania Board of Medical Education and Licensure, 103
Perfection Developer, 235
- Perkins, Benjamin Douglas, 15-18
Perkins, Elisha, 9-12, 14-17, 44, 48
Peterson, Frederick, 357
phrenology, 3, 30
Physical Clinical Medicine, 144
Physical Culture, 119, 131, 133, 157-161
physical therapy, 291-308
Pinkham, Lydia, 53
Pistols for Two, 181
plastic surgery, 217-223
Poole, P. Hollow, 125
poropathy, 136, 137
Powell, C. Lyman, 63
Poyen, Charles, 47
Practical Christianity, 64
practo-therapy, 137
Prince, Morton, 347, 351, 356
Principles of Medical Ethics, 365; quoted, 341, 371, 372
psychoanalysis, 344-364
Psychology of Conviction, 55
Psychology of the Unconscious, 353
Pusey, William Allen, 242
Pyle, C. C., 162
-
- Quackenbos, John R., 75
Quacks of Old London, 6
quartz-therapy, 137
Quick, Herbert, 255
Quimby, Phineas Parkhurst, 44, 47-51

INDEX

- Rademacherism, 30
radiocrinology, 240, 241
Randolph Eclectic Medical Institute, 36
Rank, Otto, 352
Rawson, F. S., 74
reducing bread, 261, 262
Reed, Louis S., 62, 63, 72, 95, 113, 115, 127
Reed, Walter, 16
Reformed Medical College of New York, 34
rejuvenation, 228-241
Reymont, 255
rheumatism, 338-341
Rice, Thomas, 178, 179
Robertson, Orrin, 138, 139
Rogers, L. D., 118, 130
Rokitansky, 31
root beers, 282
Rubin, Herman H., 240
Rubinstein, Helena, 340
Rush, Benjamin, 24, 32
Rush's Thunderbolt, 24, 32
Ruskin, John, quoted, 210
- St. Louis College of Physicians and Surgeons, 41
Salmon, quoted, 336, 337
Samson Agonistes, quoted, 21
San Francisco Medico-Chirurgical Society, 140
Sanatogen, 12, 13
sanatology, 137
Sandburg, Carl, 120
Sandow, 163
Sanger, Margaret, 244, 246
Saturday Evening Post, 314
- Saturday Night*, 158, 160
Science and Health, etc., 51, 58, 59
Science and Life, quoted, 191
Scientific American, 149
Scientific Christianity, 74
Schlatter, 70
Schnitzler, Arthur, 6
Scott, Evelyn, 357
Scribonius Largus, 291
Seneca, Lucius Annaeus, 254
Shakespeare, quoted, 210
Sheehan, J. Eastman, 217
Sheppard-Towner act, 204, 206
Siemens, H. W., quoted, 288
Sigerist, Henry E., quoted, 344
Simmons, George H., 82
Sinclair, May, 357
Sinclair, Upton, 3, 16, 126, 148, 159
Skoda, 31
slenderization, 331, 332
Smith, W. Whatley, 149-151
soda waters, 282, 283
Soddy, Frederick, quoted, 191
Sokoloff, Boris, 325
somopathy, 137, 138
spectrochromism, 125, 138, 201
Spinal Therapeutics, 141
spiritualism, 74, 75
Spofford, Daniel Harrison, 57, 58
spondylotherapy, 132, 141, 144

INDEX

- Spondylotherapy*, 141
Stahl, 19
Standard Remedies, quoted, 38
Star, St. Louis, 41
Steinach, 230-233
Steiner, Walter R., 11, 16
Stekel, Ernst, 352
Still, Andrew, 35, 76-82, 85-87, 90-92, 96, 97, 98, 99, 111; quoted, 76, 77, 78, 79, 80, 81, 91, 92, 97
Still, Edward, 96
Still, James M., 96, 97
Stopes, Marie, 246
Strategy of Masculine Seduction, The, 354, 355
Strongfort, Lionel, 175-177, 178
Sudhoff, Karl, 6, 24
Sullivan, J. H., quoted, 90
Sullivan, John L., 269
Sun, Baltimore, quoted, 311
Swift, Jonathan, quoted, 166
- Tate, Henry, 25
Tannenbaum, S. A., 351
theosophy, 75
Thomson, C. J. S., 6
Thomson, Samuel, 34, 35
Thomsonism, 34, 35, 39
Thomson's Materia Medica, etc., 35
Thought, 362
Thunder and Dawn, quoted, 30
Tidd, Jacob, 32-34
Tilden, J. H., 131
- Tilton, Abigail, 46, 52
Time, 160
Times, Kansas City, quoted, 310, 311
Titus, H. W., 177
Tribune, Chicago, 310
Tridon, André, 358
Trine, Ralph, 73
tropo-therapy, 138
Tucker, Sophie, 61
Twain, Mark, quoted, 98
- United States Public Health Service, 193
Unity, 64, 74
Universal Sanipractic College, 126
Useful Drugs, 285
- vegetarianism, 268-270
Venus, 5
Vesalius, 30
veterans, legislation *re* care of, 207-209
Veterans' Bureau, 207, 208
vibrations, 293
Viesselius, George Andrew, 32, 33
violet rays, 292, 293
Virginia State Registrar, quoted, 197-200
Vital-O-Gland Company, 237
vitamins, 257-259, 271, 272, 325
Vita-O-Pathy, 138, 139
Voliva, Glenn Wilbur, 70, 71
Voronoff, Serge, 233

INDEX

- Walker, James J., 317, 339
Walsh, William, 358
Walton Chemical Company, 238
Wanamaker, John A., 369
Ward, Fanny, 61
Warfare of Science With Theology in Christendom, quoted, 44
Washington, George, 12, 315, 316
Washington Board of Health, quoted, 192, 193
water, 279
Webster, Mrs., 52
West, Rebecca, quoted, 314, 315
Western College of Drugless Therapeutics, 133, 134
Westfield Testing and Research Laboratories, 261
White, Andrew D., quoted, 44
White, George Starr, 132-134
White, Stewart Edward, quoted, 315
whole wheat bread, 262-265
Wiggam, Albert Edwin, 317
Wilbur, Sybil, 63
Williams, 163
Wilshire, Gaylord, 153, 154
Wilson, Woodrow, 310, 334
Wolf, Heinrich F., 354, 355
Woodfin, William H., 125, 126
Worcester, Elwood, 71
Worthington Medical College, 35
Wunderlich, 31
Wundt, W., 352

yellow fever, 16, 17
Young, Brigham, 349

Zander, Gustav, 164
Zeissl, M., 232
Ziegfeld, Florenz, 332
Zola, Emile, 255
zodiac therapy, 139
zonotherapy, 125, 132, 139, 201
Zweig, Stefan, 53, 54; quoted, 54, 57, 344